

Modern packaging



Nominated for *Packaging's Hall of Fame*® Story on Page 86

September 1951

• "you name it...I helped make it!"



Starch for the printed word

—in paper. You're looking at starch as you read this magazine. Two kinds. Starch that helps to bind together the millions of tiny fibers used in paper making. To add strength. Better folding qualities. And starch that also helps to coat the paper's surface. To make it smooth, glossy, bright. Less transparent. To provide improved printing properties. So that illustrations delight the eye. Type is clean, sharp, easily read. And printing is faster—up to 30,000 pages an hour.

... and I can tell you more about paper starches.

• "you name it...I helped make it!" For defense purposes. Starch is used in military maps and blueprints. In greaseproof wrappers for medical supplies. Envelopes. Stationery. And starch is used in the adhesives that make paper boxes, corrugated overseas shipping containers. In spiral-wound artillery shell cases. The NATIONAL touch is everywhere. Starch applied through imaginative research and service. To every item of defense and daily life.

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NATIONAL STARCH PRODUCTS INC.

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SOFT SEAL permits cartons to be opened far more easily than conventional case-sealing glues.

SOFT SEAL comes ready-for-use. For all types of corrugated and fibrous cardboard stocks. Sets fast. Machines beautifully.

We'd like to seal some of your cases with **SOFT SEAL**; and some with your present glue. Then have you open both. Or, we'll send you a trial drum.

FREE BOOKLET: SUCCESSFUL CASE SEALING will assist users of corrugated and solid fibre containers in improving their sealing work.

A corrugated or solid fibre shipping case is only as efficient as its seal. Suppliers of these containers have made numerous structural improvements to give your products added protection against the hazards of shipping, but losses continue because many shippers still use sealing methods and materials which are outmoded or ineffectual on the majority of case-stocks manufactured today. Carriers estimate that containers lose at least 50% of their value unless the bottom and top flaps are properly sealed.



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New York 16, N. Y.

I'M INTERESTED IN:

- ☐ A **SOFT SEAL** demonstration in my plant.
- ☐ A trial drum of **SOFT SEAL**.
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Mr. _____

Company _____

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CARTONS
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in today's SELF-SERVICE selling.
Watch your sales and profits increase with
GAIR CARTONS

GAIR
SHIPPING CONTAINERS
ASSURE A
SAFE
ARRIVAL
*because they are engineered
to withstand shipping hazards*

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PAPERBOARD • FOLDING CARTONS • SHIPPING CONTAINERS

SEPTEMBER 1951

Modern packaging

Vol. 25

No. 1

September 1951

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★

★

Life-Size*Portrait*

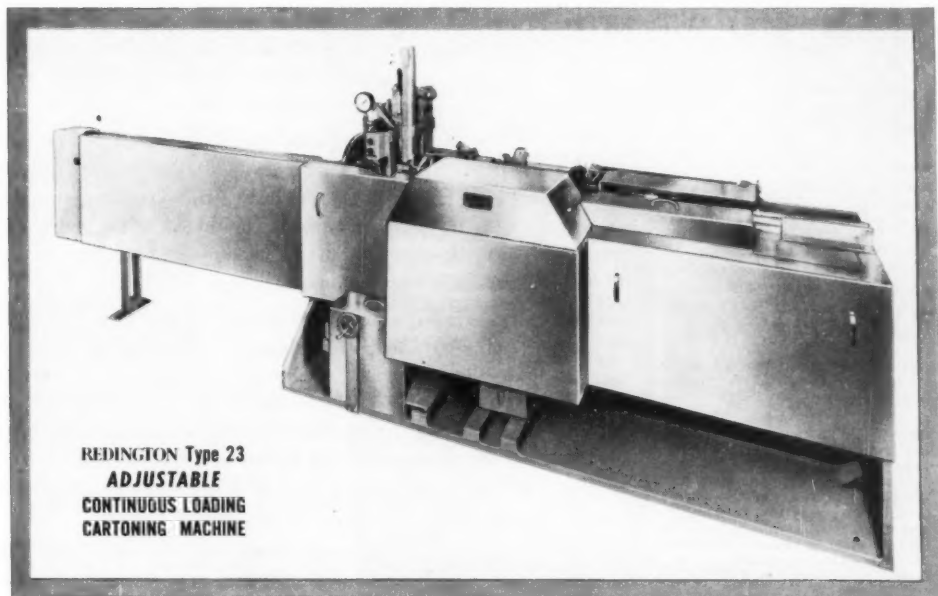
of a **REDINGTON** *Cartoning Achievement*

You are looking at the portrait of what is probably the smallest carton ($\frac{3}{8}$ " x $\frac{3}{8}$ " x $1\frac{1}{2}$ ") ever successfully handled on an automatic cartoning machine. A specially adapted REDINGTON Type 23 packs precision-made "Duracrome" and "Master" Renew Points in these midget cartons for the Esterbrook Pen Co., Camden, N. J.

There were unusual problems to overcome in handling these narrow, hard-to-stack carton blanks efficiently—particularly in magazine loading and feeding. Redington engineers came up with an ingenious special guiding device in the magazine. With cooperation from the carton manufacturer in the method of packaging the cartons originally, the difficulty disappeared.

Here is how the REDINGTON handles this unusual packaging assignment:

Feeds and opens collapsed cartons from magazine . . . inserts in each one Renew Point (which has been laid in the intake conveyor pocket by operator) . . . closes carton by tucking in the end flaps . . . and the machine is designed to operate at speeds up to 120 packages per minute.



**REDINGTON Type 23
ADJUSTABLE
CONTINUOUS LOADING
CARTONING MACHINE**

Our skilled engineers—who have helped develop better packaging of everything from codfish to razor blades—will be glad to give practical advice on how to improve your cartoning operation, no matter whether it is large or small. Bring us your problem.

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SEPTEMBER 1951

**AUTOMATIC MACHINES
for
CARTONING
WRAPPING
SPECIAL PACKAGING**

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EDITORIAL

Technology without men?

THE IMPENDING CRISIS in technical manpower, threatened primarily by lack of a national policy on military deferment, is further pointed up by a survey of colleges showing that industry is getting barely a quarter of the 80,000 new engineers it needs this year and—in the face of rapidly expanding research requirements of both industry and the Armed Forces—will see the number of engineering graduates dwindle steadily over the next three years to a 1954 total of less than half of this year's.

According to the Engineering Colleges Research Council, military research alone last year required 54,000 scientists and engineers. This is 47% of all the scientists and engineers engaged in research—and the size of the current military budget indicates an increase to 70%.

The *Industrial Bulletin* of Arthur D. Little, Inc., points out that if the Armed Forces take members of the reserves and the draft eligibles, industry will get only about half of this year's 38,000 engineering graduates, while about a quarter of the engineers already employed in industry are in the reserves and subject to call.

Business executives are more than two to one in favor of a National Scientific Personnel Board to handle and control scientific manpower, according to a survey conducted by the Evans Research & Development Corp. Blanket deferment of all technical men is not favored, but a substantial majority is in favor of permitting science and engineering students in the top third of their class to finish their education and go directly into industry without military service.

Only 40% of the companies contacted in the Evans survey have sufficient technical personnel at present. The remainder can only hope that they will be able to recruit needed help from graduating classes—a hope that appears vain indeed, in view of the dwindling size of these classes, unless support is given to a plan for controlled distribution of this vital commodity.

The Editors





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Pouches in the open termi-
nals successful machin-
disign of our designers
plantations that swell
your sales.

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recently invited by the Depart-
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in designing the latest and most
modern plant layout for future
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who talks your language is
yours for the asking . . . at no
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ter or telephone.



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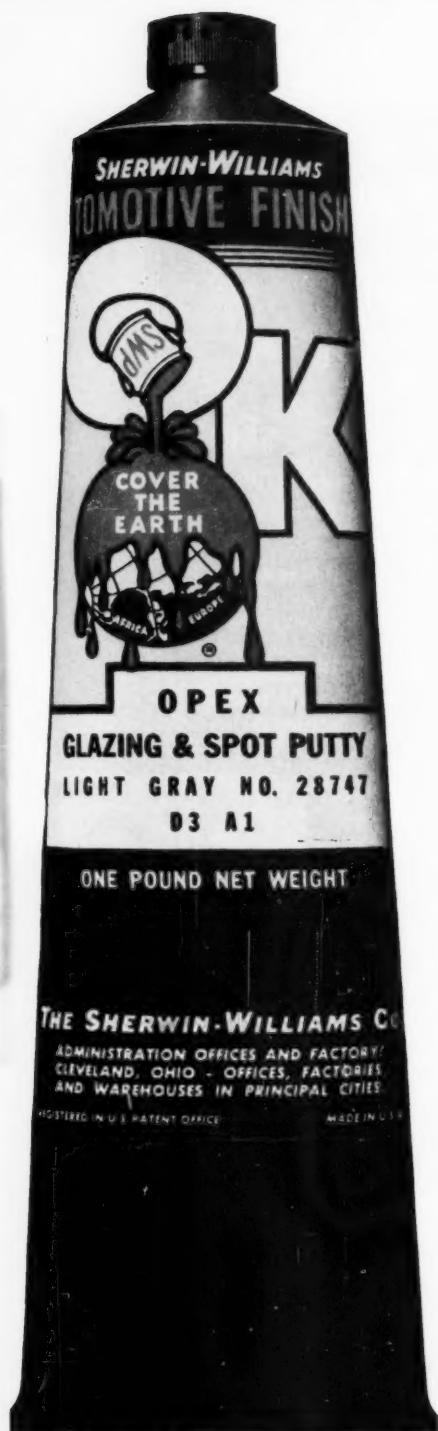
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CONVERTERS AND PRINTERS OF CELLOPHANE, PLIOFILM, PLASTICS, ACETATE, FOIL AND GLASSINE

SEPTEMBER 1951



...for products

that take rough treatment...

ALCOA

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For easy dispensing, you can't beat a tube.

For strength, for ability to take sharp, clear lithography in any combination of colors—you can't beat Alcoa Aluminum Tubes.

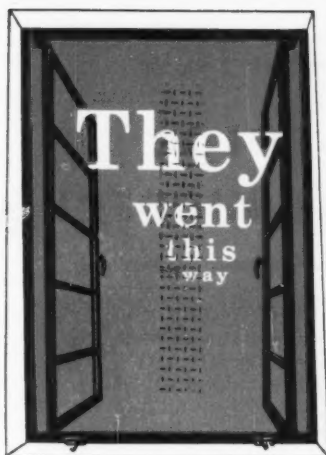
REARMAMENT NEEDS COME FIRST, and you may not be able to get all the Alcoa Tubes you want for consumer use. For information on availability and deliveries, call your Alcoa Sales Office, listed under "aluminum" in your classified telephone directory. Or write ALUMINUM COMPANY OF AMERICA, 1751J Gulf Building, Pittsburgh 19, Pennsylvania.

*for convenient dispensing
nothing beats a tube*

ALCOA



First in Aluminum Tubes



Out the Window with these Major Packaging Worries

1. Excess Weight

Scale test proves that IMCO Polyethylene Jars are 5 times lighter than glass jars. Besides bringing "Touch Appeal" to jar packaging, IMCO Polyethylene Jars will save money in shipping costs.

2. Breakage

Actual high-speed photograph tells its own story. A simultaneous drop shows IMCO Polyethylene Jar intact while glass jar shatters. No more scarred dresser tops. Stop all hazards of broken glass.

3. Permeation

Actual ice cube-sun test proves that the dead air space between the double walls gives protective insulation.



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Double-wall construction provides insulation—overcomes permeation.

IMCO Polyethylene Jars are available in 1, 2, and 4 ounce sizes with standard GCM finishes. All colors, or we will match your specific color request.

IMCO unsurpassed hot stamp printing of your label in any color, gives a permanent identification for your product.

Increase your sales with consumer-appealing

IMCO POLYETHYLENE JARS

Samples available upon request.

WHEN YOU SEE
THIS MARK
You're Looking
at Quality



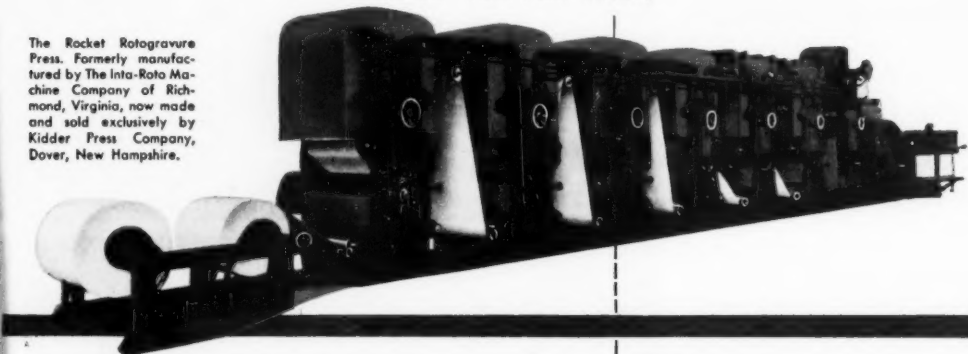
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fulfill the three major
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for waxed paper, box wrappers, etc.,
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"ANILINER" and "CELLOPRINTER"
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with gravure units — for decorative
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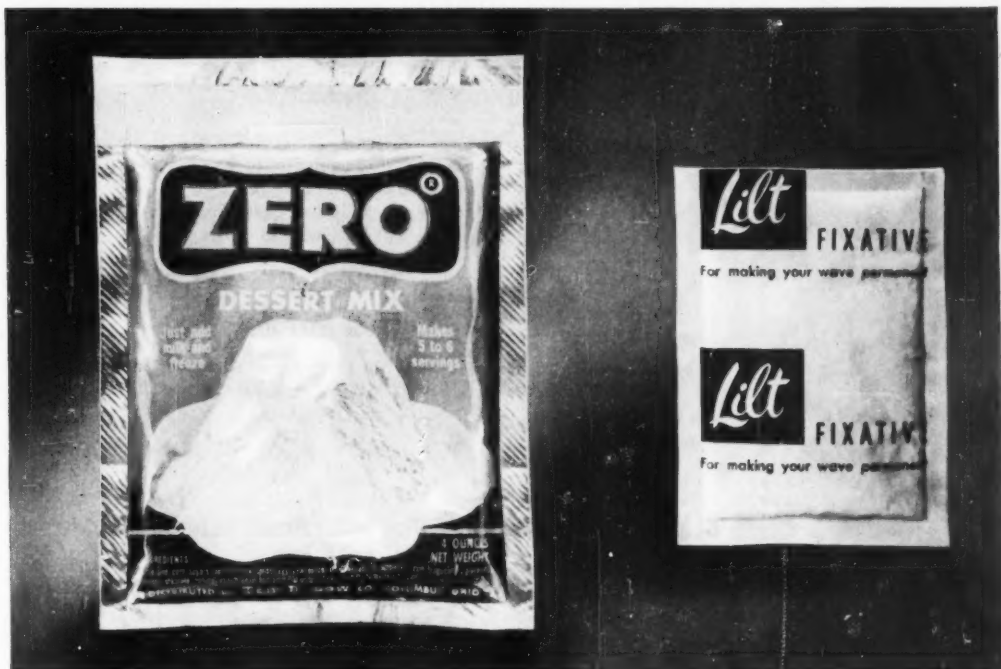
SLITTERS AND
REWINDERS

for paper mills, finishing rooms,
and converting plants — up to 115
inches in width.

Want to make your package a Standout?

Laminate WITH Acetate

THE MOST EFFECTIVE SINGLE IMPROVEMENT YOU CAN GIVE YOUR PACKAGE!



Combination packs of Acetate Transparent Film, aluminum foil with heat-sealable lining provide maximum eye appeal and protection for foods and other consumer products. Wraps manufactured by Shellmar Products Corporation, Mt. Vernon, Ohio.

Acetate Provides:

- Added lustre and sales appeal
- Superior color depth and brilliance
- Added package strength
- Protection for printing
- Scuffproofness

Nothing lifts a package above competition like a layer of acetate film. Color comes alive . . . printing stands out . . . and your package becomes a high pressure salesman for your product.

Look into the sales potential of acetate laminations. Write for names of converters who can transform your package with acetate. Celanese Corporation of America, Transparent Films Dept. 108-I, 180 Madison Avenue, New York 16, N. Y. In Canada, Canadian Cellulose Products, Ltd., Montreal and Toronto.

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Whatever the packaging need, there's a Betner bag to fill it!

Just a few examples of Betner's complete bagging service:



DUO-TITE... the Perfect "No-Sift" Bag

At last, the ideal bag for products which must be packaged in siftproof containers... insecticides, fertilizers and other dry chemicals. DUO-TITE's sturdy construction combines special liners with folding, gluing, and heat-sealing. Available in sizes holding up to 25 lbs. of bulk powdered material.



THERMOSEAL... the Bag with 20% More Protection

It's a fact. There is 20% more protection offered by Betner's THERMOSEAL than by other closures. Best of all, THERMOSEAL eliminates staples and other adhesives, and insures water-vapor protection, siftproofness and retention of flavor.



BENCOSEAL... the Bag or Wrap with Extreme Water-Vapor Protection

Absolute sanitation, dryness and flavor freshness are guaranteed by this unique combination of paper, metal foil and tissue laminated with a thermoplastic wax film. BENCOSEAL may be heat-sealed at moderately high temperatures without fear of blocking, thereby rendering itself to high speed production. It lends itself to any type of printing for consumer eye-appeal.



FLAV-O-TAINER... the Bag with Vacuum-Packed Freshness

Whenever freshness is a must—Betner's FLAV-O-TAINER delivers it! Lined with Pliofilm (mfd. by Goodyear T. & R. Co.), all inner seams are hermetically sealed. And simply by replacing air with inert gas, and heat sealing at top, FLAV-O-TAINER becomes an air tight unit.

A complete bag service...

from idea to finished bag. Also machinery for closing coffee bags, and inserting and closing liner bags in cartons. Your inquiries are welcome. Samples with full technical information will be promptly supplied.

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Borden's Camembert Ripens Right
in TRI-STATE'S BOX THAT BREATHES!



© Borden Co.

"What we need," Elsie explained, "is a rigid plastic container that will keep our Military Brand Camembert free from dust, dirt and contamination, and yet leave space for air to circulate around and gently age this delicious cheese after packaging."

Back to Tri-State where packaging problems had been solved for them in the past came The Borden Cheese Company. And Tri-State devel-

oped the rigid plastic container shown above for this largest selling of all Camemberts in the United States.

The half-round rigid plastic box is molded of clear Styron to provide excellent visibility of the three, foil-wrapped portions. Specially engineered wedges in lid assure a tight fit but permit air to enter box. Raised Borden signature on bottom of container allows complete interior air circulation and permanently identifies the package.

Tri-State Plastic Molding Company has an equally complete and economical answer to your packaging problems. Whether you manufacture a food, a confection, mass or class products of any kind, we're equipped to mold to your specifications—to answer your particular needs with a gleaming, transparent, rigid plastic showcase that will keep your product fresher, cleaner, more appealing. Or you may choose from our stock shapes and sizes—the World's Greatest Assortment of Rigid Plastic Boxes.



The best Rigid Plastic Boxes are Injection Molded by
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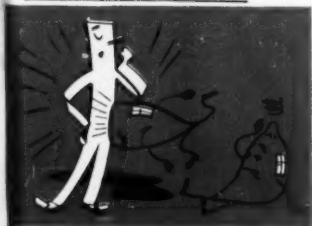
CHICAGO: 176 W. Adams St., Franklin 2-7292

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FOR MILITARY PROTECTION

Drastic new Military Packaging Requirements of a Jet-Atomic Age prove again the supremacy of REYNOLDS ALUMINUM FOIL!

Why you should use
Reynolds plain aluminum
foil for parts packaging



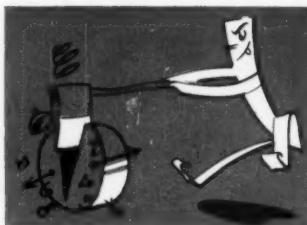
Keeps moisture out

Reynolds Plain Aluminum Foil is a positive barrier against transmission of moisture vapor. In gauges .0015" and up, it has zero MVT (moisture-vapor transmission) rate.

Few would have believed, in 1941-5, that any packaging task could exceed the range of America's jungle-to-arctic operations...or that any packaging achievement could surpass the record of Reynolds Aluminum Foil in every phase of that war.

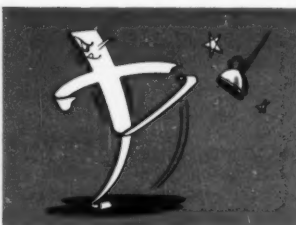
Yet, today, the requirements are even more drastic. Now we have supersonic speed at 10-mile altitudes, with pilots who can hardly spare a hand to open rations. We have far more mobile armies who live and fight largely on pocket-packages. We have air drops that subject supplies to crushing shock as well as new extremes of heat and cold. And as the jet-atomic age develops, we have more and more parts to ship...more vital parts, that demand unflinching protection.

With every new test, Aluminum Foil stands out ever more dramatically as the supreme military packaging material...plain or in laminations. And Reynolds stands out as the largest foil supplier, with the most experience in military packaging problems. Manufacturers are invited to avail themselves of this experience.



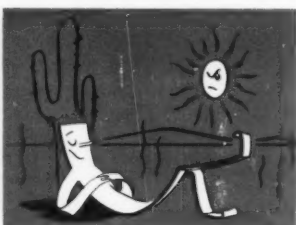
Cuts packaging time

Reynolds Plain Aluminum Foil offers maximum conformity to the object to be packaged. Shapes easily by hand. No time lost tying or binding.



Naturally greaseproof

Reynolds Plain Aluminum Foil prevents greases off parts from drying out or hardening, and thereby losing their value. Because it is naturally greaseproof on both sides, the color requirements do not apply.



Maintains top efficiency indefinitely

Since it does not depend on treatments for its waterproof qualities it is not affected by long exposure to dry air or heat.

REYNOLDS METALS COMPANY
Sales offices in principal cities. Or address **Reynolds Metals Company,**
Packaging Market Sales,
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WORLD'S LARGEST
PRODUCERS OF
ALUMINUM
FOIL



REYNOLDS

AND "CIVILIAN DEFENSE"

**For Consumer Goods, Reynolds Aluminum Foil
offers this same Military-Proved Protection**

...PLUS UNEQUALLED SELLING-POWER!

Military developments in Reynolds Aluminum Foil open up great new opportunities for the "civilian defense" of foods and all perishable goods...protective packaging to meet *any* situation. But above and beyond this defense of product quality, is the supreme *selling-power* of aluminum foil...the irresistible eye-appeal of rich colors on bright metal...the shopper-stopper display value that makes aluminum "The Brightest Salesman" in this supermarket age.

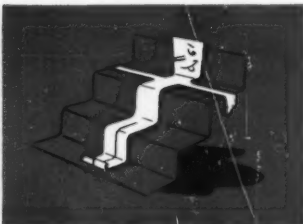
Reynolds has led in developing and making the most of this Brightest Salesman. Reynolds designers are specialists in the unique values of foil. Working directly with Reynolds own large roto-gravure printing operation, they bring out these values to maximum effect.

This complete service is at your disposal for future planning. Call any Reynolds Office. You'll be signing up "The Brightest Salesman"...the salesman that sells every second of every supermarket day... Reynolds Aluminum Foil!



Absolutely non-absorptive

Reynolds Plain Aluminum Foil does not absorb compounds used in dipping as other barrier materials do. This means a direct cash saving on the dipping material used.

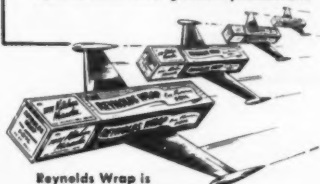


No "spring back"

Reynolds Plain Aluminum Foil is "dead soft" and holds molded contours. Excellent for parts impractical to package by old fashioned methods and materials.

FOR YOUR PAPER LABELS AND WRAPS USE THE NATION'S LARGEST ROTOGRAVURE PRINTERS

Reynolds, the largest supplier of beer labels, has four large modern printing plants, strategically located across the country. Supplied with continuous tonnages of quality paper, Reynolds offers superior service on paper labels, and all types of large run printing. Reynolds Design Department and unequalled printing facilities make an unbeatable combination, assuring manufacturers every advantage of high-speed, multi-color gravure production.



Reynolds Wrap is
"all out" for defense...
Return Flight Guaranteed.

ALUMINUM

A REAL CONNOISSEUR'S ITEM

Who wouldn't be pleased with a cordial like this? Red Horse Twig* is so entirely different . . . so obviously intended for the connoisseur. Just imagine — a delicious, peppermint flavored cordial with a sparkling, sugar-crystal "tree" growing right in the bottle. A genuine treat for the eye as well as the taste.



The closures used on these products are Crown Screw Caps. The Deep Hook Thread construction provides dependable sealing and the special vinyl spot "Inaseal" liner is an added factor of safety in sealing and against tampering. This scientifically determined combination of closure and liner is a typical example of Crown's ability to meet sealing requirements.

We will appreciate an opportunity to discuss your closure needs, and to offer the services of both our Chemical and Research laboratories without obligation on your part. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*



*Red Horse Twig peppermint schnapps liqueur and the other products shown here are prepared and bottled by D. J. Bielzoff Products Co., Chicago, Illinois, U. S. A.

CROWN CLOSURES

Approved by millions of housewives

4 INGREDIENTS MAKE A BEST SELLER!

The Heath Candy Company built its success with a product of unvarying quality . . . produced with the finest ingredients obtainable.

One of these vital ingredients is PACKAGING! In that fleeting instant when the customer makes the choice at the candy counter, it's the package that has to say: "This is quality—buy me!" That's why every Heath bar ever made has been packaged by Milprint.

Like Heath, you'll find it pays to call your Milprint man *first*—the packaging expert who works with the widest selection of packaging materials and printing processes in the entire industry. Why not call him *today*?

This insert printed by Milprint

- 1 GOOD PRODUCT INGREDIENTS
- 2 CONSISTENT QUALITY
- 3 AGGRESSIVE SELLING
- 4 PACKAGE BY MILPRINT



"FOLLOW-THRU" by Milprint.
Examples: the handsome Heath
brochure and catalog page.

Milprint INC.
PACKAGING MATERIALS
LITHOGRAPHY & PRINTING

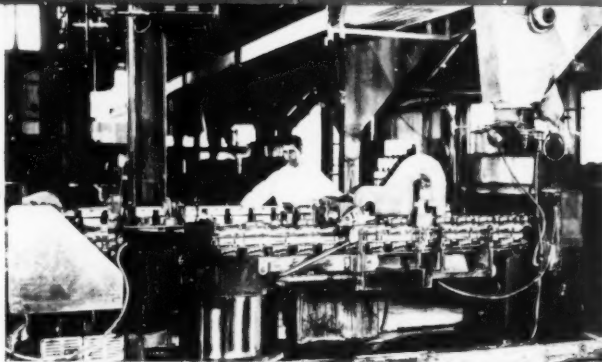
General Offices: Milwaukee, Wis. • Sales Offices in Principal Cities

Printed Cellophane, Pliofilm, Polyethylene, Acetate, Glassine, Foil, Folding Cartons, Lithographed Displays, Printed Promotional Material



NEVERSTOP MACHINES

**The Choice
For Leading Brands**



Model 601A High Speed Neverstop Carton Filling and Sealing Machine

These machines feed the cartons from a supply, bottom seal, fill and top seal—entirely automatic. Speeds up to 250 and more, per minute.

Tons of products, soap and cleaning powders, detergents, food and grocery products, etc., are packaged every day on S & S High Speed Neverstop Machines.

Let us show you how S & S equipment can cut your packaging costs.

Filling—Packaging—Wrapping Machines • "Speeds to Suit Your Needs"



STOKE S & S SMITH CO

PACKAGING MACHINERY

PAPER BOX MACHINERY

Exclusive West Coast Distributor:

Anderson-Barngrover Division of FMC

Subsidiary of Food Machinery and Chemical Corporation

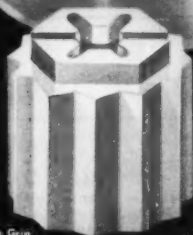
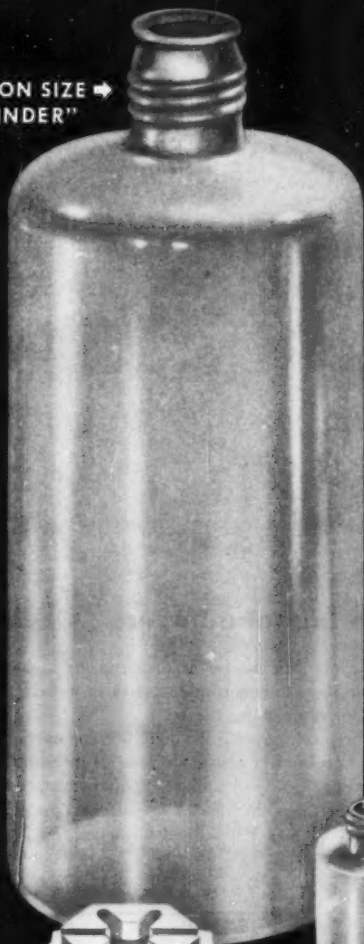
San Jose 5, California

Frankford, Philadelphia 24, U. S. A.

An Ever Growing Range for Your Ever Growing Uses

MILLS PLASTIC® Bottles

GALLON SIZE →
"CYLINDER"



Gallon Wrench Grip Closure

More and more firms are discovering that MILLS-PLASTIC unbreakable bottles serve their needs far better than any other bottles. MILLSPLASTIC leak-proof containers now meet daily use in packages for cosmetics, acids, photosensitive chemicals, hygroscopic materials. Our growing line of standard bottles and expanding scope of custom work is the direct answer to these widening needs—yours among them.

STANDARD BOTTLES—Our history-making gallon sized bottle and precision engineered closure are the largest in our standard line which also includes Mills "Cylinder" in 2-4-6-8 ounces; Mills "Oblong" in 2-4 ounces. Both styles are available in natural Polyethylene or your preferred color. Standard atomizers, closures and tubing are also available.

CUSTOM BOTTLES—We are currently meeting specialized needs by creating custom shaped bottles in an unprecedented variety of styles, sizes, colors. We also make special atomizers and closures.

Let us show you today how and why MILLSPLASTIC bottles can best fill your needs.

ELMER E. MILLS CORPORATION

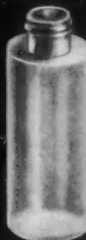
2930 North Ashland Avenue • Chicago 13, Illinois

Sales Agent: W. Braun & Company

Chicago, 300 N. Canal

New York, 15 Fifth Avenue

Detroit, 139 W. Maple, Birmingham, Michigan



2 oz. "Cylinder"



4 oz. "Oblong"



2 oz. "Oblong"



4 oz. "Cylinder"



Standard Closures



Pat. No. 2,515,093 Elmer E. Mills Corp.



"HEADACHE" TABLETS for tube buyers

Every Sun Tube is designed from scratch to meet a customer's *specific* need—to cure his packaging "headaches" so they *stay* cured.

That is the reason no two of the blanks shown in the picture above, from which a dozen different Sun Tubes will be formed, look alike.

But the most important specification differences are often those you can't see—thousandths-of-an-inch

variations in diameter or thickness, or in coating, that give customers trouble-free tubes as perfect for the purpose as tubes can be.

The precision we insist on at this and every other step in tube-making is made possible by Sun Tube's long experience in holding to *quality* standards...to produce tubes that fill at lowest cost, protect the product, add the utmost in sales appeal.


SunTube Corporation

181 Long Avenue, Hillside 5, New Jersey



Chicago 26, Ill. . . . James L. Coffield, Jr., 7720 N. Sheridan Rd.
St. Louis 1, Mo. . . . M. P. Yates, Arcade Building
Cincinnati 8, Ohio . . . Ralph H. Auch, 3449 Custer Road
Seattle 4, Wash. . . . King & Anderson, 1016 First Ave. South
San Francisco 3, Calif. . . . King & Anderson, Western Merchandise Mart, 1355 Market Street
Portland 13, Ore. . . . King & Anderson, 4439 N. E. Killingsworth Ave.
New Orleans 19, La. . . . R. P. Anderson Co., 925 No. Solomon Place

Houston 6, Tex. . . . R. P. Anderson Co., 1426 Castle Court
St. Paul 1, Minn. . . . Alexander Seymour, 712 Pioneer Bldg.
Dallas 2, Tex. . . . R. P. Anderson Co., 317 Texas Bank Bldg.
Los Angeles 65, Calif. . . . King & Anderson, 3635 Fletcher Drive



"on the beam" packaging

for **SPERRY** AIRCRAFT INSTRUMENTS

in **SPARKLING** Alcoa Aluminum Foil

Safer, all-weather flying . . . that's the big news behind Sperry Gyroscope Company's aircraft instruments. Used by both military and commercial aircraft, Sperry instruments help pilots fly the correct flight path . . . keep them "on the beam."

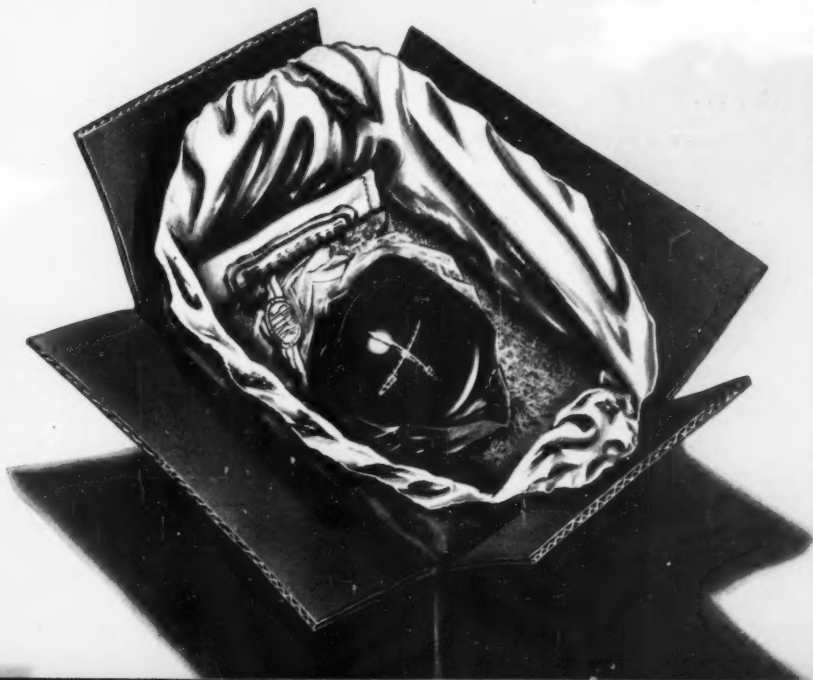


Often shipped to far-off places for installation, sensitive instruments must be packaged to assure accuracy on arrival.

Alcoa Aluminum Foil helps Sperry meet this requirement.

Used as the liner for a specially constructed bag, sparkling Alcoa Foil forms a barrier against penetration by such damaging corrosive elements as extreme heat, cold, dirt, moisture.

Is Alcoa Aluminum Foil available for packing *your* product? That depends on current government restrictions. Best qualified to answer this question are leading packaging firms—pioneers in protective packaging, in Alcoa Foil.

May we send you their names? Write to: ALUMINUM COMPANY OF AMERICA, 1760J Gulf Building, Pittsburgh 19, Pennsylvania.





Top . . . # 11 Tube

Center . . . # 13 Tube

Bottom . . . # 14 Tube



CLEVELAND CONTAINER

Mailing Tubes

Made To Meet Specific Needs

OUR THREE-PIECE TELESCOPE MAILING TUBE, # 11 . . . sturdy, spirally wound wall construction with tight fitting metal ends. Label sealed . . . available in diameters from $\frac{1}{2}$ " to $6\frac{1}{2}$ ". Lengths as desired.

OUR # 13 MAILING TUBE with firmly attached cuffs and spirally wound sturdy walls. Available in diameters and lengths as desired.

OUR # 14 MAILING TUBE with curled ends, likewise, has quality and price advantages. Available in diameters and lengths as desired.

Cleveland Containers. Mailing Tubes and Combination Metal and Paper Cans are quality-at-low-price products . . . the result of over 25 years of packaging production experience.

OUR CREATIVE DESIGN DEPT. is at your service to give you the type of container you desire, with prices and quick delivery performance that ensure satisfaction.

The CLEVELAND CONTAINER Co.

6201 BARBERTON AVE. CLEVELAND 2, OHIO

• All-Fibre Cans • Combination Metal and Paper Cans
• Spirally Wound Tubes and Cores for all Purposes

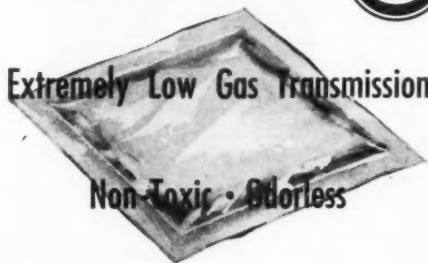
PLANTS AND SALES OFFICES: Cleveland, Detroit, Chicago, Plymouth, Wis.,
Jamesburg, N. J., Ogdensburg, N. Y. • ABRASIVE DIVISION at Cleveland
SALES OFFICES: Grand Central Terminal Bldg., New York City; Washington
Gas Light Bldg., Washington, D. C.; West Hartford, Conn.; Rochester, N. Y.
Cleveland Container Canada, Ltd., Prescott, Ontario • Offices in Toronto and Montreal



Low MVTR (under 0.15g. Southwick)



Extremely Low Gas Transmission



Non-Toxic • Odorless

A NEW
ORGANIC
MEMBRANE
BARRIER

Greaseproof

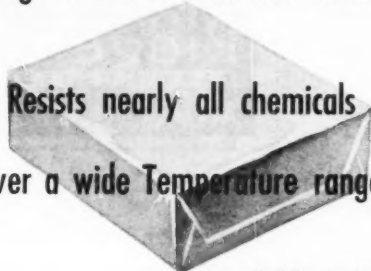
FOOD
Saran Coated Paper
WRAP

Heat sealable
for pouches • bags
overwraps
unit packages
liners

Tough • Pliable • Does Not Shrink

Resists nearly all chemicals

over a wide Temperature range.



Available NOW

Sara Seal

... has many
barrier properties
previously obtainable
ONLY
with a metallic
membrane

Available
WITHOUT "D.O"

NEW Sara Seal is here...

for packaged foods ... for automatic filling and
wrapping equipment ... Saran thicknesses from 1½
mils up ... paper weights from 30 lbs. up, according
to functional requirements. Investigate the new
protective packaging possibilities of this new
wrap for foods ... suggested applications ...

**Dried Yeast • Dehydrated Soups
Powdered Milk**

Coated by the LOXOL process

The LOXOL PROCESS, another HPS development, perfectly unites
base stock and thermoplastic resins by hot-melting to paper, fabric
or foil. Laminants and residual solvent odors are eliminated, pin
holes are unknown, all the resin's values are retained.

Write for Samples • Complete Information

© LOXOL T. M. Reg.

H. P. SMITH PAPER CO.
MANUFACTURERS

Flexible Barrier Materials • 5007 W. Sixty-Sixth St., Chicago 38, Ill.



*Leading Manufacturers of
Pharmaceutical Products - Recognizing
that Fact - give Preference to....*



FOR FINE FOLDING CARTONS

SUPERIOR PRINTING SURFACE • ASSURED UNIFORMITY • BRIGHT FAST AND SOIL RESISTANT COLOR
HIGHER VARNISH GLOSS • BRIGHTER - SMOOTHER • LUSTROUS BRUSH FINISHES AND EMBOSSINGS
CUSTOM MADE FOR EVERY ORDER • CONTROLLED COLOR MATCHING

Representatives

H. B. Royce, Detroit
Philip Rudolph & Sons, Inc., Philadelphia
A. E. Kellogg, St. Louis
Norman A. Buist, Los Angeles

MADE AT RIDGEFIELD, N. J. BY LOWE PAPER COMPANY

MODERN PACKAGING

FOIL *Craft*



JOIN THE FOILCRAFT HIT PARADE!

Join the hosts of manufacturers who have scored hits through the use of Foilcraft's brilliant, distinctive wraps, labels, tags and decorative displays.

Whether it be a cheese or butter wrap, a box wrap for the Christmas season, a gift wrap for Mothers' Day, a merchandising display for your materials, or a new label for your products; whatever the size and shape of your package, whatever the occasion, Foilcraft's visible quality will compel the attention of the consumer.

We are also producers of barrier bags for defense packaging.

Our complete designing and merchandising departments are at your disposal.

Free samples on request . . . write now for specific information with respect to your requirements.

FOILCRAFT PRINTING CORPORATION

3611 14th AVENUE

BROOKLYN 18, NEW YORK

NATIONAL CANS

Going Places---



Fine polo players have
learned to depend on their nimble
ponies for speed, follow-thru and
stamina . . . just as leading packers depend on
National Can for vast superiority of can construction

—for improved stabilized interior linings—for clear brilliant
lithographic reproduction. Your goal, too, should be National Can.

Why not phone or write, today? We'll be glad to show you how
National Can's "know-how" will help your products "go places!"



NATIONAL CAN CORPORATION

110 EAST 42nd STREET, NEW YORK 17, N.Y.

quality paper coatings using a single solvent with



You can get outstanding coatings on glassine (shown) and kraft stocks using standard coating machinery and PLIOLITE NR.

N**A**TURAL Rubber PLIOLITE (PLIOLITE NR) gives you outstanding advantages in paper coatings. Used for coating glassine and kraft papers, PLIOLITE NR needs only a single solvent—no complicated solvent recovery system.

Paper coatings based on PLIOLITE NR give you these highly desirable properties:

- Excellent resistance to water vapor transmission
- Excellent heat sealability in the 275°-300° F range
- Excellent anchorage to a wide range of stocks

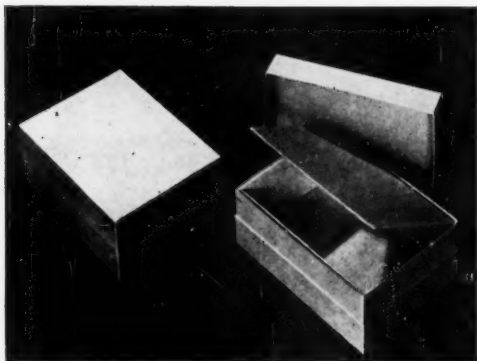
- Good gloss—free from “blocking” and with good “slip”
- Excellent crease resistance
- Low air permeability
- Low density

Check all these advantages. Compare—point for point—with your present coatings. Then decide to use PLIOLITE NR as soon as it again becomes fully available. Meanwhile—during the current shortage—send for samples for laboratory evaluation. Ask for sample and full details from:

Goodyear, Chemical Division, Akron 16, Ohio

GOOD YEAR

Pliolite—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

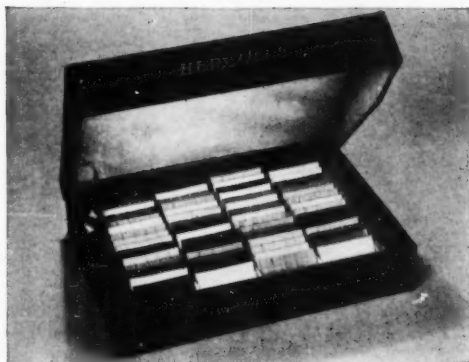


★ *Award won!*

First Award in drugs and chemicals in 1951
Set-Up Paper Box Competition. Plasma box
by Miller for Sharp & Dohme.

★ *Award won!*

Honorable mention for superiority of construction went to this display case built by Miller for Hercules Powder Company.



OUR NEXT AWARD: YOUR PACKAGE?

In the 1951 Set-Up Paper Box Competition, Miller designs won more than their share of awards. Surface beauty alone wasn't responsible. Judges based their selection also on protection of contents, appropriateness of

package, brand identification, convenience, and economy . . . *all* the factors that contribute to efficient solutions of packaging problems.

Whatever your packaging problem, for commercial or military products, you'll find that Miller tackles the assignment with the kind of skill and ingenuity that wins awards . . . and appreciation. Call in the Miller representative and find out how Miller service can help you!



Designers and Manufacturers of Set-Up Paper Boxes

Won't be put off!



You're not just moping along, nothing on your mind. Eyes stuck out like grapes giving the local Grables a gander. Waiting for time to pass, the bars to open, or an old friend from Hotboot, Ark. Or willing to settle for a windy corner, falling body, or the Maharanee of Mocha with a 400-carat sparkler in her elegant light brown nose... Not you!

You are a busy guy, going somewhere. Got business to think about, your business... Then something wiggles in a window, and you find yourself watching a cardboard cowpoke rocking on a bronc that bucks, and bucks. And bucks.

A small display made you stop, look... and think for a minute about Admiral television!... What other type of advertising can do more? Or as much?

MUST BE SOME DISPLAY! It is... (a) by Einson-Freeman, and (b) animated. Because motion engages the eye... and the eye engages the mind... this kind of display is a traffic-stopper, attention getter, comment starter, gets a lot of audience at little cost—not only for your product, but your dealer's window or counter.

It costs less than any other type of animated display. Needs no electric outlet, wiring, special installation. Operates on a flashlight battery for two weeks. A spring gives secondary animation to the cowboy in the saddle... Can be used anywhere in a store, and set up by anybody in a hurry... Makes your display dollar do a mighty big job.

Would you like us to show you some EF animated displays? And show you how an EF display can better meet your needs—and your budget?... Phone, wire, or write.

Einson-Freeman Co., Inc.

Devisers of displays that do something!

Starr & Borden Avenues, Long Island City, New York

INCREASE SALES PACKAGE PROMOTIONALLY!

FEDERAL Practical HOUSEWARES

630—SUGAR SERVER

Can be packed with jellies, jams, condiments, etc., and re-used for sugar server. 13 oz. capacity.



810—COCKTAIL SHAKER

Can be packed with hard candies and re-used for proper mixing of all drinks. 32 oz. capacity.



425—NO DRIP SERVER

A new type, inexpensive server, for honey. Plastic top. 13 oz.



137—NO DRIP SERVETTE

Plastic top. Use for honey, syrup, cream salad dressing, etc. Easy to keep clean. 11 oz. capacity.



453—TWIN-SERVER SET

For jellies, jams, marmalade, horse radish, mustard, catsup, chili sauce. Colorful, inexpensive and ideal for kitchen and breakfast nook. 6 oz. capacity each.



Here's just a sample of the many packaging products
FEDERAL HOUSEWARES offer you for your particular product



430—1 1/2 Qt. NO DRIP SERVER

Use as a fruit or vegetable juice server holds economy size (46 oz.) can of juice. Stores easily in refrigerator for ready use. Ideal for batters, cocktail shaker, milk, hot chocolate, ice water (slide holds back ice cubes). 48 oz. capacity.



465—OIL & VINEGAR SET

Ideal for oil and vinegar as well as honey, syrup, cream, catsup, salad dressing, condiments, etc. 7 oz. capacity each.



427—NO DRIP SERVER

Dispenser for syrup, honey, cream, salad dressing, sugar, etc. 13 oz. capacity. Plastic top. Metal slide. Also available in 7-11-32-48 oz. capacity.



631—SUGAR METER

Has the same uses as the sugar server but has added feature of releasing 1/2 teaspoon at a time. Capacity 13 oz.



467—"3-WAY" SALT & PEPPER SET

Can be packed with jellies and re-used for salt and pepper shakers. 7 oz. capacity each.

Put the Accent on Repeat Sales With Re-usable Containers!

Good old down-to-earth hard selling is what FEDERAL HOUSEWARES do for you when you package your product in these re-usable containers.

They do a multiple job of impulse selling for you. Customers see the quality of your product . . . they see the re-use value of the container . . . and most of all . . . they see the value of the tie-in sale which actually gives them triple value for their money.

...and Don't Forget This:

Your label is on the re-usable container and serves as a "home" point-of-sale reminder for a re-fill which means repeat sales for you!

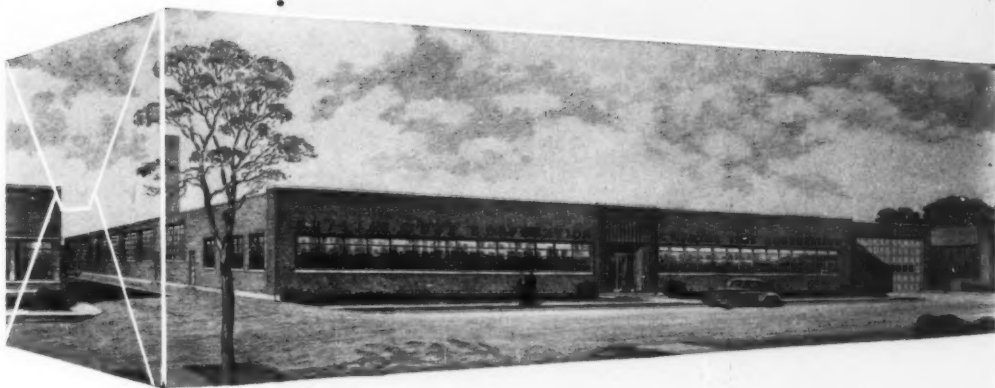
If you have a specific product to be packaged and do not see it here, or if you need a specially designed container for your product, write for a complete catalog and further details TODAY!

FEDERAL also has functional caps to fit 43, 53 or 70 mm openings.

Vinylite sealing liners available on request.

FEDERAL TOOL CORP.

3600 WEST PRATT BOULEVARD • CHICAGO 43, ILLINOIS



Here's our newest packaging job...

You're the magician . . . that helped make possible this new plant and general office at 6625

West Diversey Avenue, Chicago, where we expect to be located about August 1st.

The CRYSTAL TUBE CORPORATION wishes to thank you for your past patronage, and belief in our future . . . that has made expansion of our facilities both necessary and possible.

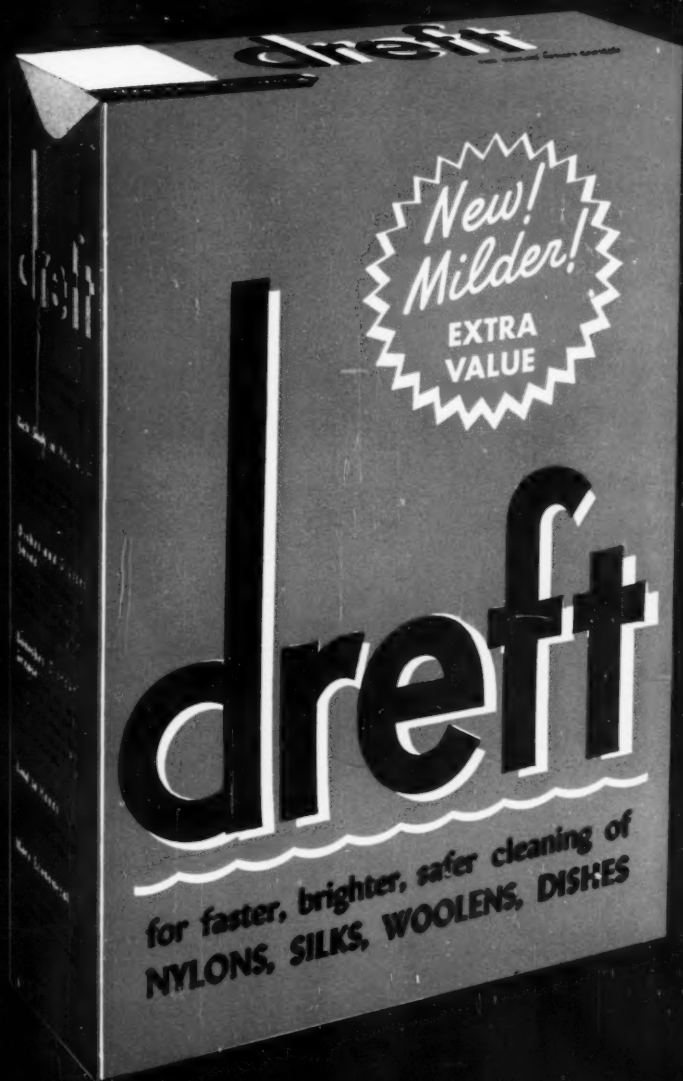
Be sure to visit us at our new quarters, when next you're in Chicago. And if you have a packaging problem that involves cellophane, polythene or barrier materials on Government contracts, a CRYSTAL TUBE representative will be glad to work with you.

write or visit us at the

CRYSTAL TUBE CORPORATION 6625 W. DIVERSEY AVE., CHICAGO 35, ILLINOIS

Branch Offices in New York, Philadelphia, St. Louis, Minneapolis, Detroit, Louisville and Dallas
Plain and printed CELLOPHANE BAGS, ENVELOPES, TUBES, POUCHES • Printed CELLOPHANE, FOIL and GLASSINE ROLLS and SHEETS • Holiday BANDS • CELLOPHANE and PLIOFILM Utility ROLLS • PLIOFILM and POLYTHENE BAGS • Government BARRIER MATERIALS





From the Gardner Gallery of famous American Packages

PERHAPS THE WORD IS...

Confidence

Isn't that what makes any product on the nation's shelves become great . . . the confidence it wins among millions of people?

And isn't it just as logical that, in choosing their supplier of boxboard and cartons, the makers of such products should look to the company that has earned *their* confidence?

Here at Gardner, we feel sure that this confidence extends a great deal beyond our modern plants and precision facilities. It's a confidence in Gardner's determination to constantly seek and find the better way . . . to invest minds and men and money in the challenging and never-ending job of doing better tomorrow, what we do well, today.

THE GARDNER BOARD AND CARTON CO.

Manufacturers of Folding Cartons and Boxboard

GENERAL OFFICES: Middletown, Ohio - PLANTS: Middletown, Ohio; Lockland (Cincinnati), Ohio
Sales Offices in Boston, Chicago, Cleveland, New York, Philadelphia, Pittsburgh, St. Louis



ALL 4 FILLED ON 1 ARENCO



Illustrations show typical fills. The Arenco Filler will handle tubes, jars, vials and cartridges in larger sizes, too.



Hopper or filling head to fit product. No container, no fill. Automatic cleaning and cap tightening for tubes.

● Where speed, cleanliness and accuracy are required, the Arenco Filler cannot be surpassed. Whether you're packaging water-thin suspensions of antibiotics, medium viscosity creams or heavy non-flowing compounds, they all can be handled efficiently by the Arenco.

Not only is the Arenco versatile in the range of products it fills, but it fills an extreme range of containers as well—from tiny 1 cc vials to giant 250 cc (8¾ ounce) tubes.

Sterility Only stainless steel or resistant metal contacts the product being filled. All of these parts—including the stainless steel single cylinder pump—are easily and quickly demountable for cleaning and sterilization.

Changeovers Size adjustments and material changeovers take only moments—not hours. And the Arenco will fill most products at speeds from 40 to 55 containers per minute.

Accuracy Even when the smallest quantities are being filled, the Arenco maintains the high degree of accuracy for which it is world famous. Recent tests on filling 1 cc ampoules show accuracy to $\pm 1\%$. "Give-away" on larger fills is even less.

Service The same organization which services 2,000 other Arenco machines in all parts of the country is available to service your Arenco filler. Competent mechanics and complete stocks of spare parts are always on hand. The nearest Arenco representative can supply full details. Contact him now.

ARENCO Machine Co.
INCORPORATED

25 West 43rd Street, New York 18, N. Y.

REPRESENTATIVES

R. P. Anderson Co., 317 Texas Bank Bldg., Dallas 2, Texas
King & Anderson, 1355 Market St., San Francisco 3, California
Tom McLay, P. O. Box #14, Port Deposit, Maryland
Packaging Equipment, Inc., 2013 Olive St., St. Louis 3, Missouri
Burnard C. York Packaging Machinery, 5807 W. North Ave., Chicago 39, Ill.
Canada: Richardson Agencies, Ltd., 454 King St., West Toronto



OLD STYLE BREAD... NEW STYLE WRAP

The new style wrap is the wrap that does more than protect . . . it sells. Both old and new products, foods or soft goods, can benefit by being packaged in the *selling* wraps Standard can design and print for you.

Standard
COLCRAFT
printing company

PRINTERS OF CELLOPHANE, ACETATE and GLASSINE SINCE 1936
COLUMBUS, GEORGIA

Sales Offices: Dallas, Texas—Charlotte, N. C.—Jackson, Miss.

SEPTEMBER 1951

Bost's
**OLD
STYLE
Bread**



One half pound of this bread supplies you with at least the following amounts or percentages of your minimum daily requirement for these essential food substances: thiamine (Vitamin B₁) 50%; riboflavin (Vitamin B₂) 17.5%; niacin (another "B" vitamin) 5 milligrams; iron 40%.

BOST'S BAKERY, INC.
SHELBY, N. C.
NET WT. 1 LB.

Bost's
**OLD
STYLE
Bread**



One half pound of this bread supplies you with at least the following amounts or percentages of your minimum daily requirement for these essential food substances: thiamine (Vitamin B₁) 50%; riboflavin (Vitamin B₂) 17.5%; niacin (another "B" vitamin) 5 milligrams; iron 40%.

BOST'S BAKERY, INC.
SHELBY, N. C.
NET WT. 1 LB.

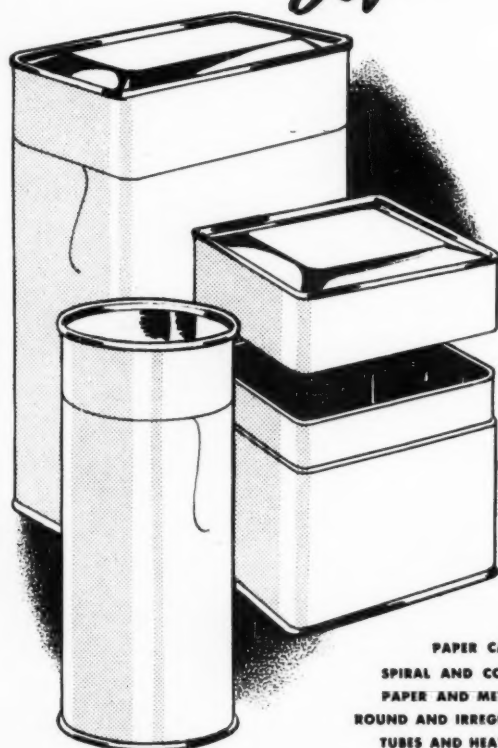
EASY

AS FALLING OFF A LOG...



TO OPEN AND CLOSE

Sefton's single telescope string-opening can



PAPER CANS
SPIRAL AND CONVOLUTE
PAPER AND METAL ENDS
ROUND AND IRREGULAR SHAPES
TUBES AND HEAVY CORES

Yes, sir... thanks to the new built-in reclosure, Sefton's single telescope, string-opening can is as easy to close as it always has been to open! This versatile can is factory-sealed and tamper-proof, too... two features that both you and your customers will appreciate! Since Sefton is tooled for every job, there are sizes galore for every product... so look to Sefton to solve your packaging problems!

Sefton
**FIBRE CAN
COMPANY**

ST. LOUIS NEW ORLEANS
PORTLAND, ORE. PIQUA, O.
DIVISION OF CONTAINER CORP. OF AMERICA

DISTRICT OFFICES: • Los Angeles • Salt Lake City • Denver • Seattle • Chicago • Cincinnati • New Orleans • Boston • Detroit • New York • St. Paul
Atlanta • Memphis • Nashville • Portland • Piqua

GET **ALL 6** EXTRAS FOR YOUR PRINTING DOLLAR

CREATIVE SERVICES... that focus market research, design, copy, and art on your specific objectives

DISTINGUISHED CRAFTSMANSHIP... that gives you the benefit of up-to-date methods, techniques, and materials

DIVERSIFIED PROCESSES... that tailor your printing to your exact requirements, whether large or small

PRODUCTION CAPACITY... that is vast, modern, and flexible enough to meet your every printing demand

INTEGRATED SUPERVISION... that gives you top quality at a fair price under one-management responsibility

COOPERATIVE SERVICES... that provide aid in distribution, publicity, and follow-up in field and market results

FORBES

L I T H O G R A P H C O .

NEW YORK • CLEVELAND • BOSTON • CHICAGO • ROCHESTER

Delivers Merchandising Impact



Creators and Producers of Packaging, Sales Service Literature, Point-of-Purchase and Outdoor Advertising by Lithography, Letterpress, Rotogravure, and Die Stamping

SPRA-TAINER Does It Again!



G.I.'s EVERYWHERE FIGHT "BATTLE OF BUGS" WITH "Automatic Weapon"

SPRA-TAINER has received its military orders: "Forward, March . . . to join our men in uniform!" Its special assignment is to help combat insects wherever they are found in profusion, menacing the comfort and the health of servicemen. Against this "sabotage," our Armed Forces are further armed with aerosol insecticide. At the touch of a button, this is jet-propelled in lethal mists — right from the pressurized Crown SPRA-TAINER.

SPRA-TAINER is the original and only lightweight, low cost propulsion can with exclusive "No Side Seam — No Top Seam" construction. Its superior strength and dependable performance under all conditions make it ideal for military use . . . and, in civilian employment, First with Manufacturers, First on the Market, First in Sales!

LOOK TO CROWN FOR LEADERSHIP IN CREATING
AND MANUFACTURING CANS FOR EVERY PURPOSE

One of America's Largest Can Manufacturers

CROWN CAN
Division of
CROWN CORK & SEAL COMPANY

PLANTS AT PHILADELPHIA, CHICAGO, ORLANDO • BRANCH OFFICES: NEW YORK, BALTIMORE, PITTSBURGH, ST. LOUIS

PRODUCERS OF PROTECTIVE PACKAGING

**WAXED PAPERS • LAMINATED ALUMINUM FOIL • BARRIER MATERIALS
ROLLS, SHEETS, BAGS**

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One (slightly used) Crystal Ball

Not a bad crystal ball... as crystal balls go... but lately it has a habit of getting cloudy when we need it most. For instance: take the case of VISQUEEN* film.

As you probably remember, VISQUEEN film was originally developed for the specific use of the armed forces. What they wanted was a polyethylene film such as had never been seen before... strong, durable, chemically inert, flexible and all the other qualities you know so well... a film that would meet rigid specifications yet be economical to use. *They got it!* And now, like many another reserve... VISQUEEN film is being called back to active service.

And that's our problem. While our Defense requirements get bigger and bigger... our customers delivery will of course dwindle. So we searched our crystal ball. And the only thing we could find is that we will have to ask you to please be patient... we're working hard, and we'll work harder to make every effort to fill your orders. You may be cut down... but we promise we will do the best we can to get VISQUEEN film to you.

*T.M. The Viking Corporation

VISQUEEN Film... A Product of

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PRESTON DIVISION • TERRE HAUTE, INDIANA

In Canada, Visking Limited, Lindsay, Ontario



IMPORTANT!

VISQUEEN film is all polyethylene, but all polyethylene film is not VISQUEEN. VISQUEEN is the only film produced by the process covered by U. S. Patent No. 2461975. Only VISQUEEN film has the benefit of the research and extensive technical experience of The Visking Corporation, pioneers in the development of polyethylene film. Be sure. Always specify VISQUEEN film for superior tear and tensile strength and greater uniformity.



Tupper Seal, air and liquid tight flexible covers fit, and are included in the sets of all Tupperware Canisters.



The Tupperware 50 oz. Canister is "standard equipped" with the Tupper Seal, air and liquid-tight flexible Pour All cover.



The Tupper Seal, air and liquid-tight flexible Pour All cover is used on every Tupperware 20 oz. Canister.



The Tupper Seal, air and liquid-tight, Pour All cover as a cover for 46 oz. cans; Tupperware Sauce Dishes and other containers of metal, glass or pottery. Foods easily dispensed without removing entire cover.



The Tupperware Wonder Bowls are usually fitted with Tupper Seal, air and liquid-tight covers.



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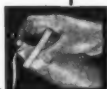
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TUPPER! Seals

air and liquid-tight, flexible covers for Tupperware Tumblers, Canisters, Wonder Bowls, Cereal Bowls and many another container of glass, metal and pottery, the contents of which it is desired to keep fresh and wholesome.



TUPPER!



FORMAL NOTICE!

9th November, 1949

EXCLUSIVE!

U. S. Patent #2,487,400

The Tupper Corporation has attained a position of leadership in this industry by incurring great expense and expending painstaking effort in the development, design, manufacture and exploitation of its many world-known products.

The Tupper Corporation further has anticipated the inevitable attacks to which leadership is subject and has taken measures provided by law to preserve the creative rights to its products, methods and design by patent protection both in the United States and abroad.

Tupper Seals for Tupperware shown in this advertisement are just a few of the forms covered in this manner and are specifically covered by U.S. Patent #2,487,400.

Only the Tupper Corporation, by U.S. Patent #2,487,400 has the right to make, use and vend container closures in connection with any and all types of containers throughout the United States and its territories as covered by the claims of the Patent.

Tupper Corporation will protect, according to law, the exclusive rights above granted

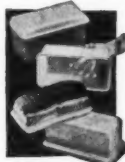
TUPPER CORPORATION

TUPPER CORPORATION

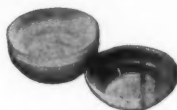


There's a Tupper Seal, air and liquid-tight flexible cover for Tupperware 2, 5, 8 and 12 1/2 oz. Tumblers too, and these Tupper Seal, covers fit many other containers of metal, glass and crockery.

The Tupper Seal, air and liquid-tight flexible Pour Tap cover, specially designed as a dispensing cover for specified diameters of containers holding foods such as syrups, salad dressings, catsup.



The cover of the Tupperware Bread Server which serves as a bread tray also is designed to give similar results as Tupper Seal, air and liquid-tight Flexible covers. Keeps contents fresh as no other such container.



When equipped with Tupper Seal, air and liquid-tight, flexible covers, Tupperware Cereal Bowls serve many another purpose.



The Tupper Seal, air and liquid-tight flexible cover made for Tupperware 8 oz. Tumblers also fits and is sold with all Tupperware Funnel as a base when funnels are used as storage containers.

"Gee—Another Swell Dessert!"



To America's tables every day come treats so tempting that clean plates and clamor for seconds are a matter of course. For wives and mothers rely on variety as well as good cooking to keep their families happy and well fed.

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1. Canco made possible the first commercial application of the vacuum-pack and vacuum-closure principles to the canning of vegetables.
2. Canco established the first Nutrition Laboratory devoted solely to the problems of the canning industry.
3. Canco established the first specifications for the chemical composition of steel used in the manufacture of corrosion-resistant tin plate.
4. Canco discovered the cause and control of a widespread type of off-flavor spoilage in tomato juice, due to an organism which Canco isolated and named.
5. Canco invented the Tenderometer which provides a means of quality control of raw green peas.
6. Canco published the first of a series of education texts on nutritive values and public health aspects of canned foods.
7. Canco publishes the one and only "Canned Food Reference Manual" (3 editions) now widely used in schools and colleges and by the medical and public health professions.
8. Canco first established a system of tempers for tin plate to produce better formed and stronger cans.
9. Canco invented the "High-Short" aseptic closing systems of canning for liquids and for solids.
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1901-50TH ANNIVERSARY-1951

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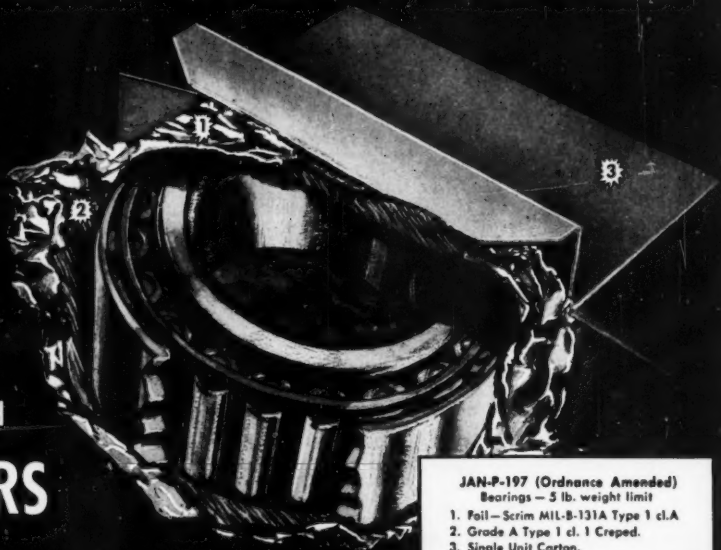
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FOR TAP-AND-DIE TOOLS. 5 lbs. lighter ...
50% smaller ... many times more durable and
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so sturdy you can drop it without breaking.**

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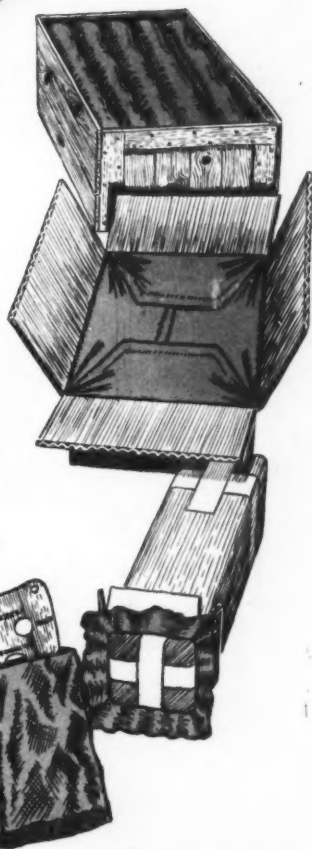
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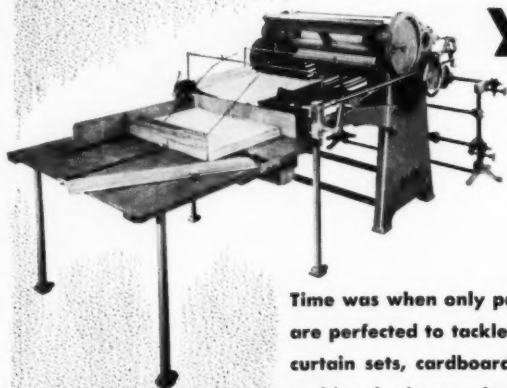


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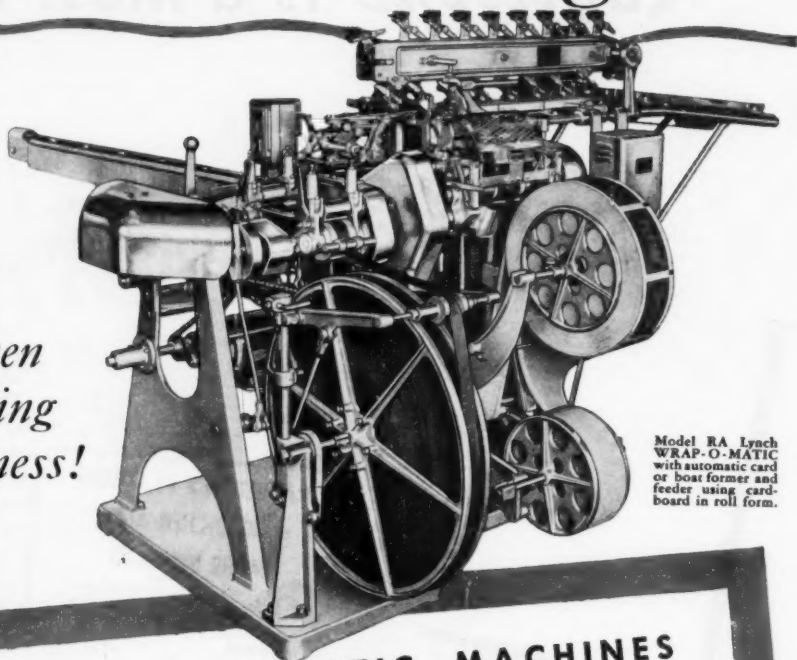
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Oneida printing has a glossy, sparkling sheen that is incomparable. It is sharp, clear, easy to read. And ... you'll like their smooth performance on automatic packaging machinery—the way they keep lines operating profitably all the time.

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BALANCE



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LIES WITH YOUR SUPPLIER.

WHETHER YOU STRESS GLOSS
OR SEALING STRENGTH,
BLOCKING RESISTANCE OR
HARDNESS, TENSILE STRENGTH,
LOW OIL CONTENT OR
OXIDATION RESISTANCE,
MELTING POINT OR SIMPLY
FREEDOM FROM ODOR, THERE
IS A MOORE & MUNGER WAX
TO BALANCE THE "LOAD"
OF YOUR SPECIFICATIONS.



REFINED PARAFFIN WAX SLACK AND SCALE WAXES MICROCRYSTALLINE WAX POLYETHYLENE BLENDS RUBBER WAX

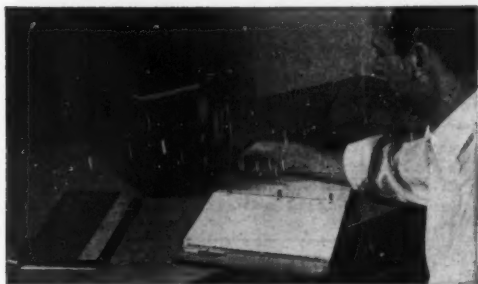
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33 RECTOR STREET NEW YORK 6



Here you see how a BBD ink—specially formulated to meet the user's requirements—is tested to determine its bleed-resistance when exposed to water, solvents, oils and chemicals. When necessary, accelerated tests are also made for bleed-resistance to foodstuffs like bacon, cheese, butter, lard.

Good aniline inks must do more than deliver clean, brilliant impressions and perform efficiently on the press. They must also take the punishment that every package and converted specialty receives *after* it leaves the printing plant. BBD INKS score on *both* points because BBD technical experts *pretest* them before production and control every step in their manufacture right on up to the point of shipment. No wonder BBD ANILINE INKS are first choice of aniline printers everywhere!



Will the ink withstand prolonged scuffing or rubbing? BBD uses a Rubometer to help determine the ink's abrasion-resistance. Scratch and scotch tape tests are also made to check adhesion of ink to stock.



BBD Aniline Inks are made to "take it"



Will the ink fade? BBD gets the answer in advance by testing a sample print in the Fade-o-meter. This instrument produces effect of direct sunlight exposure for predetermined periods—gives in hours results that would take days under natural lighting conditions.

If you'd like to know how BBD INKS can do a better job — more economically — for you . . . write today to Bensing Bros. & Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.



Bensing Bros. and Deeney
SALES COMPANY

World's Largest Makers of Aniline Ink

PHILADELPHIA • CHICAGO • WAKEFIELD, MASS.

Pacific Coast: A. M. BOJANOWICZ, Los Angeles

Export: McLAURIN-JONES CO., New York

There IS something YOU can do ABOUT INFLATION!

**Your future . . .
the future of
your business,
large or small,
depends on how
many people
understand
the story in
this booklet!**



Businessmen recognize inflation as the nation's greatest single threat. But most of us have felt "What can one man—even one business—do to stop it?" But there is a way—if enough of us work at it. We can

help more people . . . the men and women who work and vote and pay taxes . . . to understand the nature of inflation, its causes and cures. Then we will have gone a long way toward eliminating this pending catastrophe.

ONE TOOL YOU CAN USE: To help us give our own Bemis workers the inflation picture, we used the colorful, new 16-page booklet "How Stalin Hopes We Will Destroy America" produced by Pictorial Media, Inc. The more widely the booklet is used, the more good it will do . . . and it is available for distribution to your workers, too. It follows the time-proven "comic book" technique . . . dramatizes the dangers . . . and shows how all our citizens can help halt inflation before it's too late.

TESTS SHOW IT HELPS WORKERS: To get an impartial judgment of the value of "How Stalin Hopes We Will Destroy America," it was tested in Bemis plants by the Psychological Corporation under the direction of Dr. Henry C. Link, a foremost research authority.

Dr. Link says "Those workers exposed to the booklet were found to have a significantly higher appreciation of the recommended ways to stop inflation than did the workers who did not see the booklet. Details of this test are available upon request." And Bemis factory workers make such statements as "Everything it says hit home, but you'd never figure it out for yourself

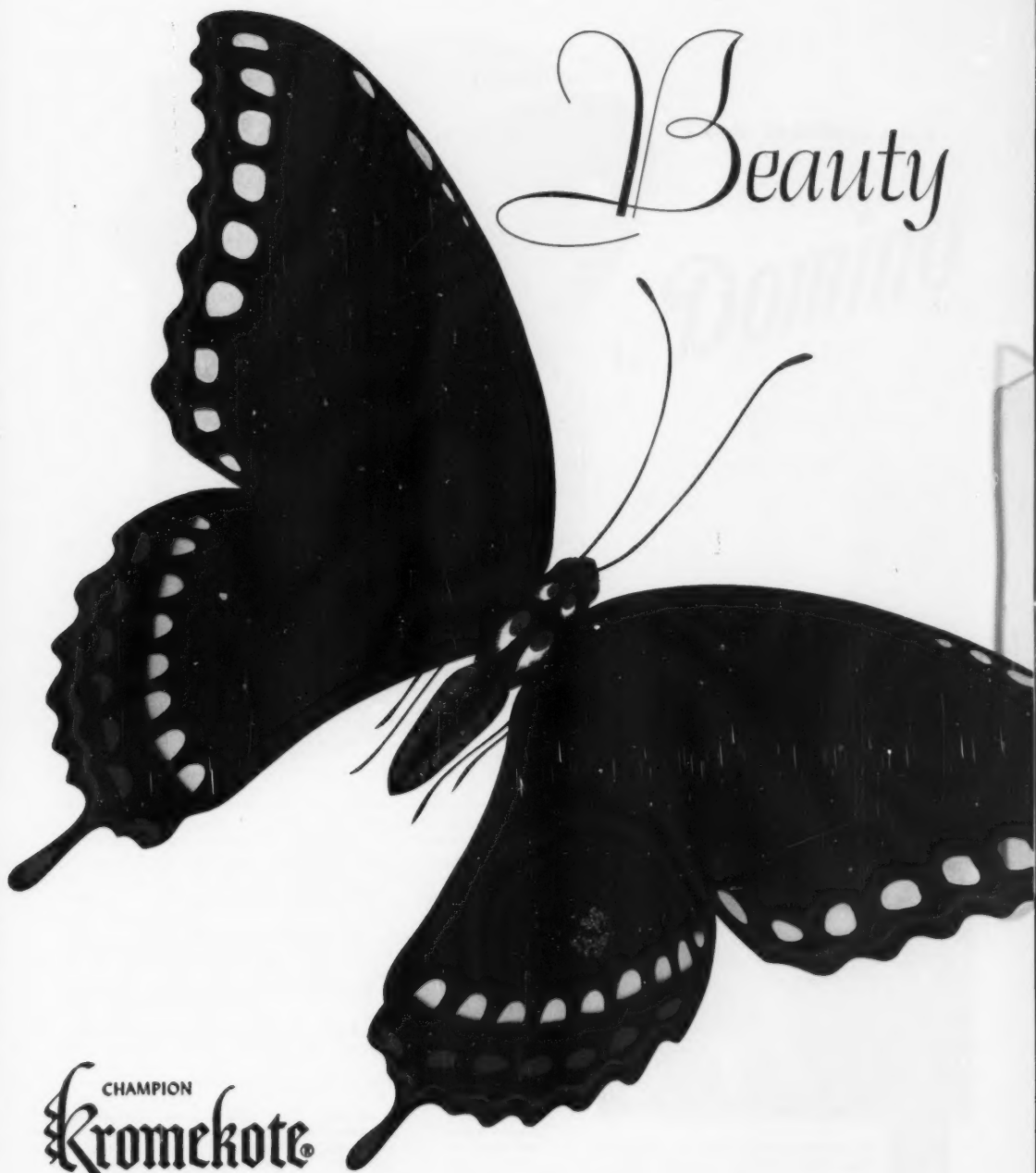
until you read it" . . . "It's told in an interesting way so anyone can understand. My daughter, age ten, understood all of it" . . . "In picture form it impresses you more. Most people don't read about it" . . . "Had ideas that we wouldn't think about otherwise while we are working away—good book, agree with it—I guess I won't be the only one."

Because we believe this message is growing more urgent every day, Bemis is taking this means to commend to other businesses this weapon against inflation. It is the first of a series of such material that we expect to use.

BEMIS BRO. BAG CO.
St. Louis 2, Missouri

FOR EVERY BUSINESS, LARGE OR SMALL: In quantities, it costs only a few cents a copy—\$10.00 for 100 copies, down to 3 cents per copy in larger quantities. Single copy free. For full information, write PICTORIAL MEDIA, INC., Attention: Paul Wheeler, 205 E. 42nd ST., NEW YORK 17, N.Y.

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is **Domino**

Another famous brand
packaged by **PNEUMATIC**

Yes, it's DOMINO — but it could have been any one of more than a dozen leading brands of sugar. For, as you possibly may not know, most famous "sweetenings" are packaged the same way — by Pneumatic machines.

American Sugar, like many other merchandisers of perishable products, uses Pneumatic's Double Package Maker Combination. This equipment produces a package within a package, an inner lining sealed separately from the carton shell.

Their use of this Pneumatic equipment gives American Sugar maximum product protection and package convenience. Equally important, it gives them the "lower cost per container" performance that has made Pneumatic the most economical packaging equipment to operate and own, regardless of initial cost.

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Mass.
Also: New York; Chicago; San Francisco; Los Angeles; Seattle; Leeds, England.

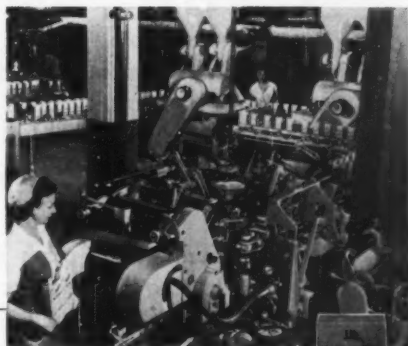
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QUAKER
COLONIAL

HOLLY
ROYAL ACADIA
ST. LAWRENCE
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BRITISH COLUMBIA



Installation of Pneumatic package making and weighing equipment at Domino's modern Sugar Refinery at Baltimore, Maryland.

PNEUMATIC

PACKAGING AND BOTTLING MACHINERY



AN ORIGINAL LITHOGRAPH BY HENRY E. WINZENRIED

"PEANUTS ... POPCORN ... POTATO CHIPS"

People love to nibble. Peanuts, popcorn, potato chips and similar delicacies have attained phenomenal sales volume throughout the country. Like all good things to eat, they must be kept fresh and appealing through well-engineered functional packaging. Many special Riegel papers have been developed for this field . . . papers that are highly protective . . . attractive to the eye . . . and that work well on high-speed machinery.

There are hundreds of other Riegel papers for almost every kind of protective packaging . . . papers that are now serving the sales leaders in many different fields. In spite of present conditions we are constantly developing even more special papers for companies who join us in planning for the future. Write us now for information.

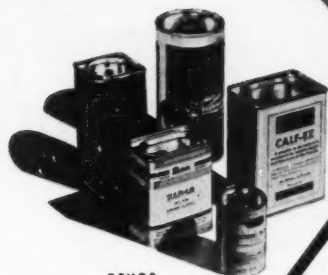
Riegel Paper Corporation • 342 Madison Avenue, New York 17, N. Y.

Riegel

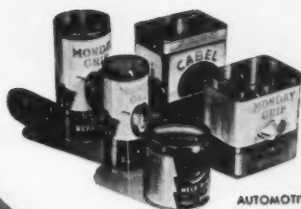
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SEPTEMBER 1951

61



Leaks STOPPED! Tampering STOPPED!

How the Alcoa
PilferProof does the
job cheaper . . . better



While the cap is held tight against the glass by controlled top pressure, threads and locking ring are rolled on to insure tailor-made fit of cap to glass.

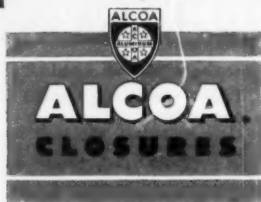


Alcoa PilferProof caps cannot be removed without leaving tell-tale evidence. When cap is removed, locking ring breaks away, remains on the bottle and cannot be rejoined to the cap.

Here's a closure that does two jobs . . . and does them better:

1. The Alcoa PilferProof seals securely . . . holds a vacuum . . . protects quality because its rolled-on threads hold the cap securely to the glass.
2. More than that, the PilferProof's unique design prevents tampering, too. That's why leading packers, such as Canada Dry, use the PilferProof to protect their products and their reputations for maintaining high-quality standards. You can see in the illustrations at the left how the Alcoa PilferProof helps do both *and at lower cost than any other method giving equal protection.*

Government regulations on the uses of aluminum now limit the supply of Alcoa Closures. For information on availabilities, consult your nearby Alcoa Sales Office, or write ALUMINUM COMPANY OF AMERICA.



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strongly and instantaneously. It can be economically printed on fast rotary presses with lustrous color effects.

Sylvania is always ready to help you with your packaging problems. Discuss them with your Sylvania representative or write us mentioning the specific application in which you are interested. Address: Market Development, Dept: MP-9.

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SEPTEMBER 1951

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Every H-A glass container is

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Sales performance is an integral

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WHALE — A mammal, not a fish, and the biggest in the ocean. His tough hide and thick, heavy layer of blubber beneath ward off cold and attack.



PARRAKEET — The junior of the parrot family. A clever little fellow with colorful, vivid plumage and sometimes a vocabulary to match.



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The average housewife takes a realistic view towards today's higher food prices. She simply shops more carefully. Food flavor, cleanliness, and wholesomeness are more important than ever. Please her on these counts, and you've won a steady customer.

KVP Papers can help you. They are made especially for food preservation. You can get them in sheets or rolls to protect every product you process. To complete the job, KVP artists and printers can add colorful design whenever it's a sales advantage for you.

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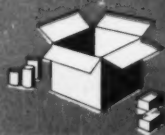
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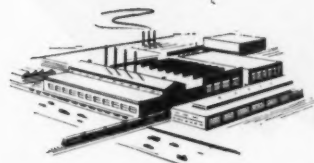


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Rambunctious Raiment

This year, the American male will probably plunk down some \$2,500 million for duds of all degree, as a hedge against nudity. This record would surpass even the \$2,223 million spent in 1949—the \$2,239 million laid out in 1950.

The category includes men's outer garments and those more exuberant and intimate items sometimes elegantly described as gents' furnishings. Everything, reading from top to bottom, from neckties to socks (both of which are available, heaven help us, in fluorescent versions). Most of this apparel is safely delivered to department stores, men's shops, clothing emporiums, haberdasheries and such, snugly tucked away in corrugated cases.

MEAD Corrugating is well qualified to play an important role in Operation Wardrobe, and does. MEAD .009 Chestnut Corrugating is made superstrong by judicious use of chestnut and other hardwood fibres. Used in conjunction with MEAD Liner, it has suited well the exacting needs of finicky shippers these past two decades and more.



Mead Board is sold direct by

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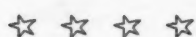
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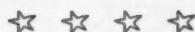
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CHOOSE THE RIGHT GLUE



for your special packaging job



USES	PRODUCT
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Waterproof caseliner gluing	CASCOLA WP-311 ... ready to use, highly water-resistant, fast set, meets Spec. JAN-P-140.
Paper labeling on glass	CASCO LP-83 ... ready to use, highly water-resistant, fast set, heavy viscosity. CASCO LP-85 ... ready to use, highly water-resistant, fast set, thinner viscosity, meets Spec. UM-186, Type I.
Foil laminating	CASCO Flexible Cement NT-539 ... ready to use, good heat and water resistance, sets at room temperature, meets Spec. JAN-P-117.
Liquid-tight, spiral-wound containers	CASCO 801-D ... powdered casein, liquid life of 72 hours at 70 F. CASCO 838 (for open sheets and heavy constructions) ... powdered casein, liquid life of 48 hours at 70 F. CASCORES CV-721 ... ready to use, water-resistant, fast set.
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● This chart of glues available for immediate shipment should enable you to select the right glue to meet any of your problems requiring a paper or labeling glue. Borden's Chemical Division has long specialized in quality-controlled glues for packaging, labeling and laminating. If we can be of assistance to you in the solution of your military or everyday gluing problems, fill in the attached coupon.

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SPECIAL TRIAL OFFER!

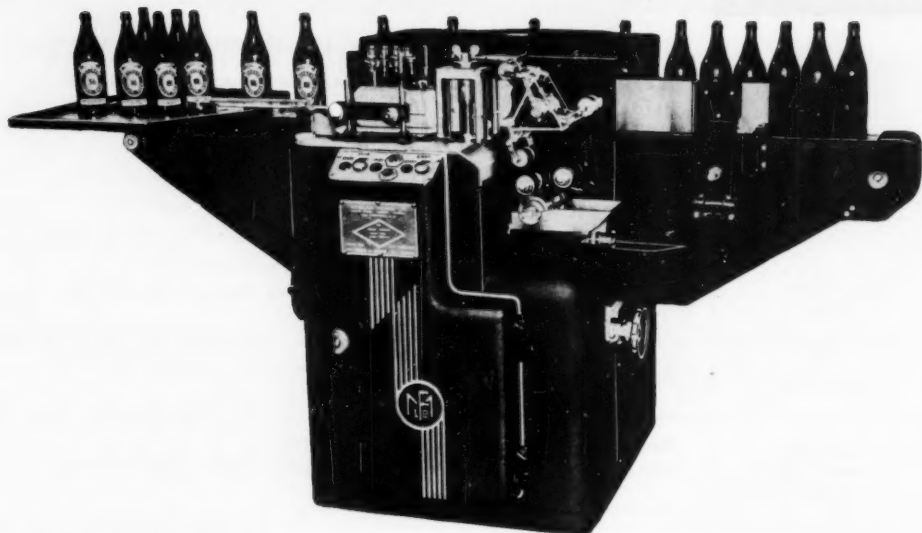
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Please ship us a 5 gal. trial order of the following
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Introducing

THE "BANKS" LABELLER



MANUFACTURED BY

MORGAN FAIREST LTD., SHEFFIELD, ENGLAND

Arrangements have now been completed between Morgan Fairest, Ltd. Sheffield, England, and Stokes and Smith Company, a subsidiary of Food Machinery and Chemical Corporation, Philadelphia, for the sale and service of the "Banks" Labelling Machines in the United States.

These machines are available in several

models and are suitable for labelling vials, bottles, jars, etc. in various sizes and shapes, and have several unique features both in construction and operation. Speeds range from 2,400 to 10,200 containers per hour.

During the past two years, over 600 of these machines have been installed in Great Britain, Europe, Australia and South Africa.

SOLE DISTRIBUTORS FOR THE U.S.A.

STOKES & SMITH CO.

PACKAGING MACHINERY

PAPER BOX MACHINERY



Subsidiary of Food Machinery and Chemical Corporation

Frankfort



Philadelphia 26, U.S.A.

**Slide, Package, Slide—but
Watch Out for Scuffs, Rubs**



Yes, packages do slide—against each other, against the sides of packing cases on shelves, across the counter. The problem of rub and scuff resistance is a continuing one to the package user and package printer. Would you like to read a copy of a paper on this subject delivered at the annual meeting of the Packaging Institute? Write to IPI headquarters on your letterhead and we will be glad to send you a copy.



**It's a Sister Act when
Paper and Ink Team Up**

The adjustment of ink to paper in package and label printing is like a sister act—if one is out of step they are both out of step. Adjustments in ink can be made, but it is better to anticipate difficulties before the job is on the press by furnishing the ink maker a specimen of stock. "Limitations of Ink Adjustments to Paper" were discussed at a TAPPI meeting. We will be glad to send you a reprint of this talk.



IPI • DIVISION OF INTERCHEMICAL CORPORATION • 67 WEST 44th ST., NEW YORK 18 • ADDRESS INQUIRIES DEPT.A

**KRISPY CRACKERS POPULAR.
SUNSHINE PACK USES
KRISPLY LITHO'D CAN**

Sunshine Biscuit Company thought Krispy Crackers too good to put in an ordinary dull looking can. Team work between good design and the Continental Can Company produced the bright, realistic, inviting can which was first shown at the Packaging Show in Atlantic City this year. The package has since proved its popularity with the public. Maybe the natural appearance of the crackers has a lot to do with the success of the package. Krisp, klean design, good plates and excellent offset lithography, using properly formulated lithographic inks in the hands of experienced printers and fabricators like Continental Can Company combined to produce this successful package.



**LOW-COST CARTON BY CORNELL PAPERBOARD CO.
FOR WRIGLEY WINS FIRST AWARD IN END USE**



**Unusual Scheme—Red, Gray,
Black, White—Stands Out.
Two Cornell Boards Used**

Wrigley introduced a low-cost carton to merchandise its new 18-stick package of gum. Cornell Paperboard Products Co., Milwaukee, Wis. produced the carton. Scheme is unusual—red, gray, black and white—makes it stand out on the shelf. Two Cornell boards were used: Cover was .022 white patent coated news; carton .028 Clay-brite news. IPI printing inks were used, as on many other prize-winning packages. Dealers report the 18-stick package is a fast selling item. Maybe the simplicity of the well-printed carton, so easy to display on the counter, is an important factor in this successful merchandising scheme.

MERRY-GO-ROUND CATCHES OWN BRASS RING

The Musical Merry-Go-Round carton produced by Continental Folding Paper Box for B. H. Shapiro Co. won 1st award in Folding Paper Box Assoc. competition—toys classification. Carton plus sleeve were designed to merchandise and safely deliver a musical toy with three side visibility. It caught the eye of judges and is winning customer approval. Printed in two colors letterpress on .026 bleached manila and varnished.



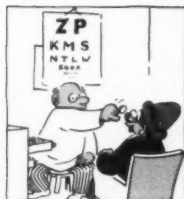
**COLOR PICKER POPULAR
WITH PACKAGING PEOPLE**

Packaging people everywhere like IPI's new Color Picker for Packages. Handy cards show how colors will look on finished package. Instructions coordinate colors with each other and with IPI's Color Guide for Boxboard. Both free from IPI.



FERD'NAND

Good Eye-Des



By Mik

Miles Ahead

in Labeling
with
PERVENAC*

Heat Seal Paper

(Makers of Alka-Seltzer get increased Production Capacity — Neatness — Permanent Adherence.)

You're looking at the straight line production-labeling operation of Miles Laboratories, Inc. as the containers for a famous product get their permanent identification with Pervenac. Permanent because when Nashua's revolutionary delayed action, heat activated dry label paper goes on — it's on to stay! And that's a "must" in the drug field.

What's more, a good looking label at the point of sale is very important to



NASHUA GUMMED AND COATED PAPER COMPANY
NASHUA, NEW HAMPSHIRE

*Registered Trade Mark
Manufactured under patent 2,462,029
**Labels applied by New Jersey Machine Corporation Machines

this national advertiser. They find neatness of registration with Pervenac . . . no wrinkling, smearing or "dog ears" — a minimum of rejects. They find increased production capacity as have other users. The Alka-Seltzer label is about a 335° wrap around.

Pervenac also labels Bactine anti-septic for Miles — a front and back labeling operation. For better labeling on wet, dry, flat or curved glass, metal, wood, film or paperboard — put it up to Pervenac.

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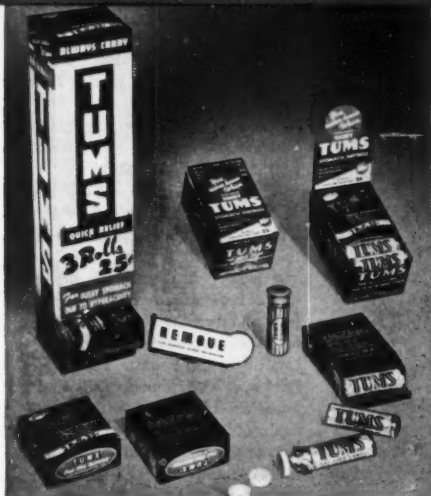
MODERN PACKAGING

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Modern packaging



VERSATILITY is keynote of Tums packaging units. In photo at left are square carrier package (left foreground), dispenser carton (left), 3-in-1 package (right) and handy metal carrier. In photo at right are popular display carton, family package (far right) containing 200 tablets in 50 flats of four each, packaged in an embossed aluminum foil carton.

BILLIONS OF TUMS

How the Lewis-Howe Co. uses a well-rounded package strategy
and highly mechanized production to dominate its field

Easing the nation's collective tum-myache is a colossal undertaking in which the Lewis-Howe Co., St. Louis, plays an important part. As the producer of Tums, which pioneered the tablet-type antacid, this company has long headed the field from the standpoint of volume. When the present Lewis-Howe building-expansion program is completed, the company will be able to turn out more than 5 billion Tums per year.

Considering the rapid growth in volume since this product was first

released on a sampling basis in 1930, it is not surprising to find that the company's packaging facilities have undergone parallel development. During the past two years, in particular, the Lewis-Howe Co. has made important changes in packaging-department equipment and layout in order to keep up with the steadily growing demand for Tums. Thanks to this program, packaging efficiency greatly increased, production per worker multiplied and space is more effectively utilized.

The Tums tablet came into existence as the result of extensive research work by James H. Howe, a pharmaceutical chemist who joined Dr. L. H. Lewis in the 1880s as his assistant at Dr. Lewis' drug store in Bolivar, Mo. Dr. Lewis' first pharmaceutical product was Nature's Remedy (NR tablets), which continues as a companion product to Tums.

Headquarters of the company were moved to St. Louis soon after the turn of the century. Shortly after World War I Mr. Howe began ex-

DRUGGIST UNITS are banded. Wrapper at left contains three family packages. Three 3-in-1 counter packages are included in banded unit at right. Center unit is a special offer—three 3-in-1 packages plus two caddies of book matches.



perimenting on a stomach antacid which is known today as Tums. Research proved that the product was not only effective in combating hyperacidity, but also produced excellent results in cases of automobile and altitude sickness. Upon returning from a world cruise in 1930, during which Mr. and Mrs. Howe and their traveling companions had ample opportunity to test the product at first hand, the clinical tests were completed and literally millions of rolls of Tums were released nationally on a sampling basis.

For the first few years, no advertising other than free samples was used, but after national distribution

had been reached, newspaper and magazine advertising were added to the budget and in 1936 radio advertising was used for the first time. Most famous of the radio programs sponsored by Tums were the "Pot O' Cold" show and the "Baby Snooks" program starring the late Fanny Brice.

Although the Lewis-Howe packaging facilities have been modernized from time to time to keep pace with production, the past two years have brought perhaps the most important changes in the company's packaging program. During this period, through the installation of advanced types of automatic cartoning equipment,

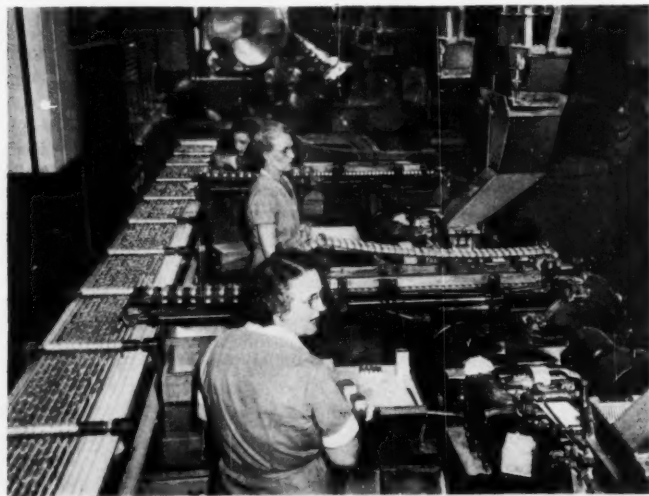
many packaging operations formerly performed by hand have been eliminated. At the same time, by equipping the plant with an overhead conveyor system which delivers the Tums directly to the roll-wrapping machines, the company has been able to discontinue the earlier practice of transporting barrels of the tablets from the fourth floor to the packaging department. Under this system, anywhere from 60 to 100 barrels were in constant circulation, crowding the freight elevators and occupying much valuable floor space. This set-up required an average of five girls to each two roll-wrapping machines, whereas now only one operator is needed for each machine.

The basic Tums package consists of a dozen of the round, white tablets wrapped in embossed aluminum foil and an inner layer of waxed tissue paper. Although the tablets do not have a severe problem of moisture pick-up, they do tend to absorb odors of other drugs, pharmaceuticals, etc., and require adequate protection. The aluminum foil wrap provides an effective primary safeguard against this problem. With the exception of the special "flats" used in the \$1 "family" package, all the Tums tablets are wrapped in the dozen-tablet rolls before being placed in any of the various types of secondary packages.

From the merchandising standpoint, versatility is the outstanding feature of the Tums packaging program. Through the years, the Lewis-Howe organization has closely studied the requirements of the retail customer who buys Tums and has developed a variety of packages bracketing every type of sale. The Tums purchaser may buy a single roll of the tablets for 10 cents or one of the "carrier" cartons containing three rolls of Tums for 25 cents. Also available is a \$1 package containing 12 rolls of Tums—including six single rolls and two of the carrier packages. The economy-minded user has still another choice—the \$1 family package with 200 tablets in 50 "flats."

Equally flexible from the point of view of the retailer, the wide selection of Tums packages gives the druggist a wealth of opportunity to display and sell the product as best fits his situation. If the customer wants a single roll of Tums, he can buy it either from the 36-roll counter carton or from one of the opened \$1

BATTERY OF 24-ROLL WRAPPING MACHINES feed 10-cent roll packages to automatic cartoning units. Hopper is filled by dump-type buckets carried by overhead conveyor. Each machine serves a single conveyor belt.



combination packages. Should the buyer desire the three-roll carrier package, he can obtain it either from an opened combination package or from the new-type counter dispenser carton, which holds a dozen carrier packages and can be either stood on the counter or hung on the wall. Customers interested in obtaining a larger supply of Tums can spend \$1 and obtain either the combination package, containing 144 tablets, or the family package of 200 Tums.

The variety of packages used for Tums requires a high degree of adaptability in the packaging department. This goal has been attained by careful selection of wrapping and cartoning equipment and close integration of all packaging facilities.

The primary packaging line, on which the 12-tablet wraps are handled, consists of two banks of 12 wrapping machines each, arranged end to end. Each wrapping machine feeds a separate lane on a conveyor belt, which keeps the rolls in individual channels, facilitating inspection and enabling any wrapping irregularities to be traced back immediately to the unit involved. Both sections of this line feed in to the center, where all the rolls are automatically assembled in a single column, side by side, for subsequent packing operations.

Supplies of Tums are delivered automatically to the roll-wrapping lines by means of the overhead conveyor system, which also passes through the production department on the floor above. Here the traveling stainless steel buckets, which hold 15 lbs. of Tums each and are equipped with dump-type bottoms, are filled. The overhead conveyor is so positioned that these buckets move directly over the feed hoppers of the wrapping machines. Whenever a machine operator needs an additional supply of the tablets, she operates a control which automatically pushes the next bucket into the hopper. No longer must the supplies of Tums be trucked to the wrapping machines.

Two automatic cartoning machines handle the output of the 24 roll-wrapping machines. One of these cartons inserts three rolls and a circular into the 25-cent carrier carton. At a speed of approximately 200 per minute, the folding-type carton is fed from the magazine and opened; the load is inserted and both ends of the carton are tucked.

Upon leaving the first cartoning

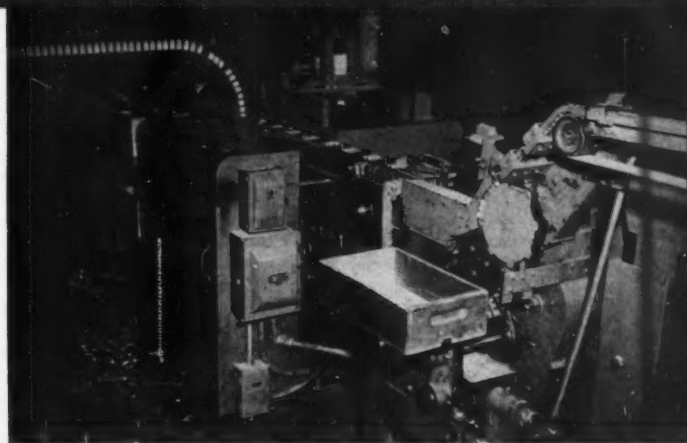
machine, the three-roll carrier packages encounter a hairpin turn in the conveyor, where a rotating arm turns each package clockwise 90 deg. so it will be in correct position for the cellophane overwrap. Each of these 25-cent packages, as well as those which go into the 12-package dispenser carton, is automatically wrapped in 300 MST cellophane for further product protection. A red tear-tape is simultaneously applied to facilitate opening. One of these wrapping machines is located between the two cartoning units, so that the carrier packages it handles may be transferred via a

short conveyor directly to the cartoner which assembles them in the \$1 combination packages. Other cellophane-wrapping units are located elsewhere in the plant, close to the additional packaging operations.

The second automatic cartoning machine loads two of the 25-cent carrier cartons, six individual rolls of Tums and an instruction leaflet which is automatically folded by the machine. At a speed of approximately 100 per minute, the folding carton is fed from a magazine and opened, the load inserted and both ends glued.

The \$1 combination packages pass

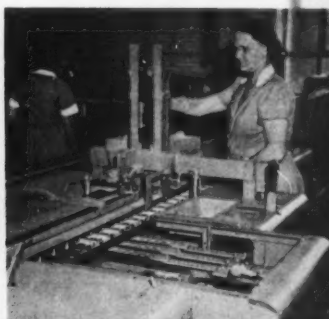
Sequence of cartoning operation



25-CENT CARRIER PACKAGES are leaving machine after application of a cellophane overwrap, prior to being combined with single rolls in the \$1 combination package. Single rolls move from the right toward cartoning unit.



CLOSE-UP of cartoning unit with inspection panel open, showing how nine units of each \$1 package are pushed into carton as it is formed and glued. The direction of travel is from left to right.



SIMILAR OPERATION is carried out by cartoning machine for placing three rolls of Tums in 25-cent carrier carton. Operator is shown loading carton blanks in machine.



PIERCING BLADE breaks the spot glue seal on front flap of carton of 3-in-1 package after cartoning, making it easier to open up for display.



CELLOPHANE OVERWRAP is put over the \$1 3-in-1 packages before they are banded into groups of three on another wrapping machine which may be seen in the right background of the photograph above.

single file down a conveyor line between pressure belts while the adhesive is drying. Then they stop momentarily beneath a piercing blade which descends to separate the spot-glued longitudinal seam, after which the packages are cellophane overwrapped. The purpose of the spot-seal arrangement is to permit the carton to be opened, loaded from the end and closed automatically, yet retain the features of a top-opening display carton. This means that after removing the cellophane overwrap, the druggist can readily open the \$1 combination package for counter display with no delay and no danger of mutilating the carton. As soon as the package is opened and the die-cut riser folded back, the attractive red, white and blue package is ready for action on the counter or at the cash register.

After application of the cellophane overwrap, these packages are then grouped in counts of three and bundle wrapped on another machine. The wrapper used for this purpose—printed in red, gray and blue—is designed with the druggist in mind. Copy on the wrapper explains that each of the 3-in-1 display boxes contains a dozen rolls of Tums packed in two 25-cent carrier packages and six 10-cent single rolls, giving him three different sales units—10-cent, 25-cent and \$1 retail.

The 25-cent carrier boxes are so designed that, when desirable, one of the three rolls of Tums may be placed in a lithographed metal carrier with friction top, which may be used by the customer in carrying rolls of Tums in pocket or purse. The metal tube provides additional protection against absorption of foreign

odors and tastes. The same overwrapping machine is used for bundling the family packages (described later) in groups of three, using a wrapper of different design.

Upon leaving the bundling machine, the wrapped packages pass to an up-ending device which stands the packages on end. Then they are conveyed to a case loader, which fills two dozen of the bundles into corrugated shipping cases in four pushes of six packages each. An operator places the container blank beside the machine in a horizontal position and the packages are loaded in from the side. Then they pass through a case sealer and pressure belts and emerge upon a roller conveyor, after which they are automatically chuted to the storage area on the first floor of the plant, ready for shipment.

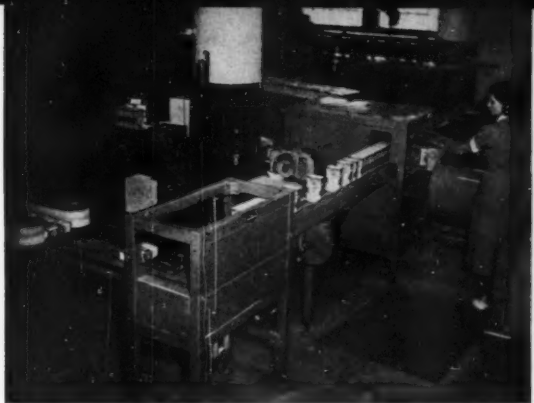
A third automatic cartoning unit sets up and packs the three-roll combination packages for use in the 12-package dispenser carton, which has enjoyed the greatest percentagewise gain of any Tums retail package. Before being placed in the dispenser package, these carrier packages are also overwrapped in clear cellophane with the red tear-tape opener. The same type of cellophane (300 MST) is used for overwrapping the 3-in-1 packages, the family packages and the 36-roll cartons before they are further packed for shipment to retail outlets. Overwraps are printed on the company's own equipment.

The 12-package dispenser cartons, designed so that they may either be stood on the counter or hung on the wall through an opening in the back, measure 11½ in. tall by approximately 2½ in. square and are printed in red,

gray and blue, with the product name running vertically on all four sides of the package. The front panel of this package has a perforated strip which is easily removed after running a fingernail along the perforations, leaving a dispensing slot in the box. The forerunner of this carton was a set-up box of substantially similar design, which was filled manually and required a large amount of manual labor to handle. The earlier carton also had a false bottom which added to the length of the box without increasing its capacity.

The machine used for the new carton sets up the box from a blank which has only the side seam glue-sealed. By exerting a squeezing action on the blank, it forces the box open for automatic filling from the open bottom, after which the top and bottom flaps are glued and sealed. The boxes are then placed in corrugated shippers. At present, this machine is setting up and filling the dispenser packages at approximately 24 units per minute, but it can double this rate and it is planned later to step up the production rate by installing additional equipment to turn out the three-roll carrier packages.

The wrapped rolls of Tums which go into the dispenser package do not come off the main wrapping line, but are handled on a battery of four roll-wrapping machines of another type, which are also serviced by a loop of the overhead conveyor installation. These new units operate considerably faster than the older-type machines on the main packaging line, applying the paper-backed foil and the printed wrapper successively instead of in one operation. The Lewis-



CASE LOADER puts the automatically up-ended 3-in-1 packages into a corrugated shipping carton. Cases are automatically sealed and then pass to storage area located on the floor below.



NEW-TYPE ROLL-WRAPPING MACHINE is one of four served by a loop of the overhead conveyor. This unit operates faster than units on main wrapping line.

Howe Co. is planning later to replace the older-type machines with a smaller battery of these newer units, which will increase operating efficiency and provide increased carton storage space.

The flats of Tums used in the \$1 family package contain four tablets each and are handled on two other wrapping machines which apply the paper-backed foil and the printed label. Fifty of these flats, containing a total of 200 Tums, are packed manually in the family package, which is a top-opening folding carton of laminated foil and paperboard. This package is distinctive in appearance, with natural foil on its inner surface and embossed gold foil on the outside, printed in blue, white and gold.

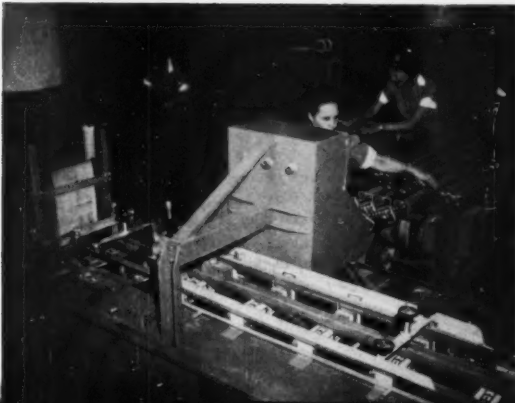
One of the newest pieces of packaging equipment installed in the Lewis-Howe plant is an automatic wrapping machine with electric-eye registration control which will be

used for overwrapping the family-style packages and also for a special "feature the leader" bundle used in promoting introduction and sale of Tums in smaller retail outlets. This combination package, wrapped in a special white wrapper printed in green, includes three of the \$1 combination packages and two boxes of Tums book matches. The wrap used for this special \$2 offer features a line drawing showing the contents of the package and playing up the virtues of Tums in relieving acid indigestion and heartburn.

In reviewing the entire Tums packaging operation, it is immediately apparent that by careful selection of packaging equipment and through realistic appraisal of its diverse packaging requirements, the Lewis-Howe Co. has made packaging an extremely important factor in building the product to its present position of leadership in the field.

CREDITS: Materials—Folding cartons (except foil-paperboard carton), Gardner Board & Carton Co., Middletown, Ohio. Foil-paperboard carton (Gair-Reynolds Foilene), Robert Gair Co., New York, and Reynolds Metal Co., Louisville, Ky. Embossed-foil wraps for 12-tablet rolls, Reynolds Metals Co. Roll-package labels, Woodward & Tiernan Printing Co., St. Louis, Mo., and Lustour Corp., St. Louis. Shipping cases, Gaylord Container Co., St. Louis. Cellophane, E. I. Du Pont de Nemours & Co., Inc., Wilmington, Del. **Machinery**—New fast-type roll-wrapping machines, F. B. Redington Co., Chicago. Automatic cartoners for 25-cent package and 3-in-1 package, R. A. Jones & Co., Inc., Cincinnati. Wrapping machines for cellophane overwraps and electric-eye registration wrapping machine for "feature the leader" offer, Package Machinery Co., Springfield, Mass. Package up-ender and case filler and sealer, J. L. Ferguson Co., Joliet, Ill. Machine for setting up and filling 12-package dispenser carton, Container Equipment Corp. Newark, N. J.

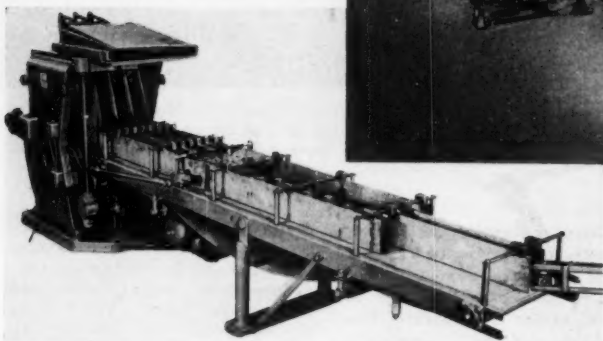
THIS MACHINE SET UP, fills and glue seals tops and bottoms of dispenser cartons. Carrier packages are shown moving into machine. Each dispenser carton holds 12 of these packages.



ELECTRIC-EYE CONTROL assures close registration for wrapping special "feature the leader" package of three combination packages and two caddies of matches.



TWISTING UNIT between labeler (left) and in-feed conveyor of caser (right) turns cans upright—the position in which they will remain throughout entire cycle of assembly operation.



COMPACT UNIT requires only one operator, will handle more than 1,200 cases per hour. Five casers are used at the Hawaiian Pineapple Co.'s San Jose plant.

Shockless caser

A GENTLE-HANDLING CASE LOADER

ELIMINATES DENT DANGERS OF CAN-TO-CAN IMPACT AT HIGH SPEEDS

Reducing the amount of impact and shock a package receives going through a high-speed, automatic packaging machine demands the highest skill in engineering design.

A new example of gentle handling is to be found in the construction and operating details of a versatile new automatic case loader that handles cans in an upright position throughout the assembling cycle.

Five of these new casers are now installed in the high-speed packaging lines of the Barron-Gray Div. of Hawaiian Pineapple Co. at San Jose, Calif. They are used to case 8-oz. cans of juices, fruit cocktail and several other items packed at the plant under Hawaiian Pineapple Co.'s famous "Dole" brand name.

Undamaged packages, uniform and continuous packing, compactness, economical, high-speed and automatic operation—these are the words and phrases used by Barron-Gray of-

ficials to describe the advantages of the casers.

Damage to cans—either metal or composite—as a result of mechanical casing is seldom a serious problem in slower-speed packaging lines even though the cans travel in close contact.

On fast-operating lines such as those at the Barron-Gray plant, however, the packager is often faced with the problem of sacrificing either speed or perfect can appearance. In some instances it is even more than appearance. Dents and spreading of can seams due to the can-to-can impact in automatic casing which may cause leakage or loss of vacuum are obviously more serious than scuffed or marred labels. So is the damage to fragile products packed inside the cans.

The new caser is designed to resolve this dilemma. It combines the advantages of continuous high-speed casing with a high degree of protec-

tion against damage to cans, labels and product. By handling the cans either upright or from the bottom throughout the assembling and loading operations, can-to-can contact is limited to the beads. This eliminates the rolling and sharp bead-to-body impact that may cause damage to the cans.

This type of caser is particularly suited to handle lithographed cans and cans containing fragile products that are easily broken. It may also be used to case round fibre and composite cans such as salt cans, the metal-end cans used for household cleansing powders and the large 46-oz. juice cans which are usually cased by hand.

At the Barron-Gray installation each caser handles between 400 and 500 cases in an hour, each double-tiered case containing 48 cans. However, it is reported by other users that the machine can be operated at speeds that are high enough to handle

the filling of more than 1,200 cases per hour.

Each machine requires only one operator who sets the pace of the output by the rapidity with which he feeds empty cases, as the entire automatic cycle of operations is set in motion each time an empty case is positioned over the loading funnel of the unit.

Cycle of operations

The cycle consists of operations that fall into two distinct parts: (1) the assembly of the cans into a case

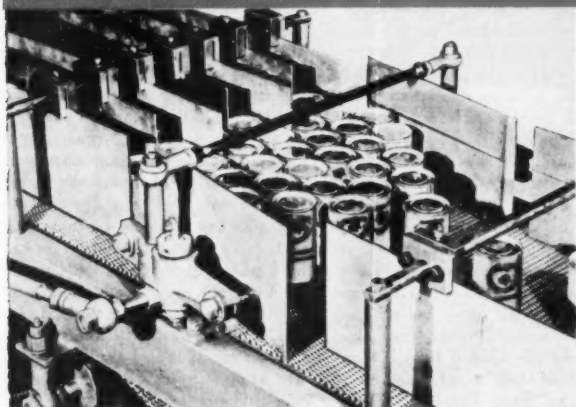
load and (2) the insertion of the load into the case.

As the cans leave the labelers in Barron-Gray's straight-line packaging layout, they are first picked up by a 90 deg. twister unit which delivers them upright on the forward-moving, continuous, woven-wire belt of the caser. An ample space ahead of the divider lanes provides holding capacity to allow for minor delays in feeding the cases at the other end of the machine whose total length is 15 ft., 4 in.

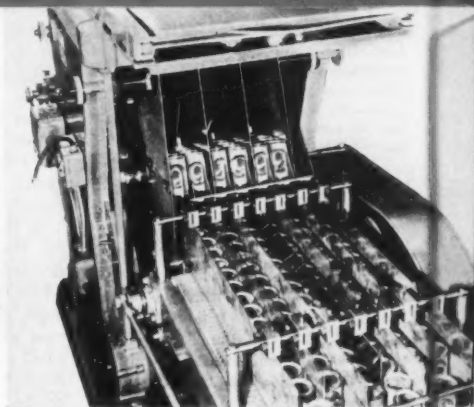
Oscillating wobble plates keep the

cans moving smoothly into the divider lanes as the belts move them along until the forward cans are pushed onto the pick-up arm at the end of each lane. The cans are in continuous motion until such time as there is a predetermined number of cans in each lane. The pressure of the forward can in the row on the pick-up arms then activates a switch which starts a shifter assembly device. This shifter assembly moves the fully loaded pick-up arms one-half of a can width, blocking incoming cans and providing clearance so that the rows

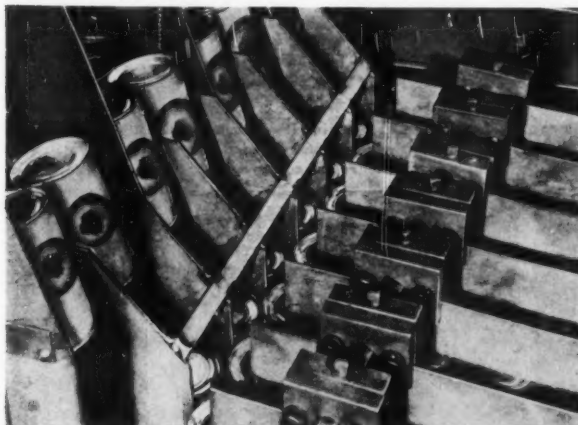
Close-up of assembling operations



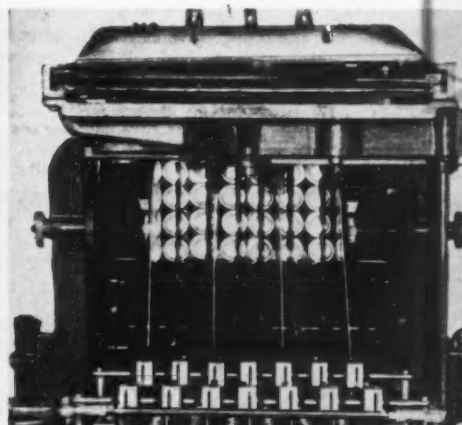
OSCILLATING WOBBLE PLATES, positioned over woven wire belt, keep can movement directed toward divider lanes at a continuous rate of speed. Cans are pushed onto pick-up arm at end of each lane.



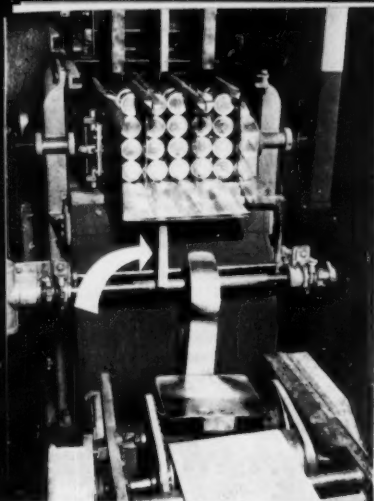
ACTIVATING SWITCH, which controls pick-up arms in the heart of the caser, is tripped only when pressure of the forward can bears against it.



SHIFTER ASSEMBLY, which is also activated by switch, blocks the incoming cans and provides clearance so that the can rising in the pick-up arms cannot mar the labels of the oncoming row of cans.



LOADING FUNNEL with full load seen with last layer of cans in final assembly position. Cans travel head to head, are lifted from bottom.

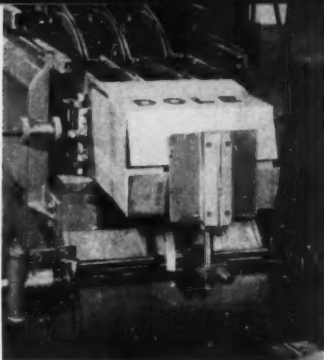


CAN ALIGNMENT in loading funnel (exit side shown here) is maintained by spring-loaded side plates and pressure bars. Arrow points to the switch lever tripped by carton flap that activates the loading-cycle operations.

of cans rising on the pick-up arms cannot mar the labels of the on-coming rows.

The first layer of cans is lifted on the pick-up arms in a vertical position and placed in the loading funnel. A second and third set of arms repeats this action for two- and three-tier loading. The assembly part of the cycle ends automatically when this loading funnel has been filled, the cans being kept aligned in the funnel by spring-loaded side plates and weighted pressure bars.

All the assembling operations are timed so that a full can load will be



HYDRAULICALLY OPERATED support arm that holds case during loading is activated also when the carton flap touches switch. The arm rises from a horizontal position (left) to a vertical holding position (right).

ready for casing each time an empty case is positioned by the operator over the exit side of the loading funnel. It makes no difference whether the case bottom is sealed or unsealed as the case is on its side when it receives the load. In this position the bottom flap (actually the top flap of the side wall) touches an activating switch as soon as it is put over the funnel.

At the start of the case-loading cycle, the switch also activates a hydraulically operated support arm which automatically rises in a 90 deg. angle behind the case before the cans are inserted. Pusher arms, located above the loading funnel, then drop behind the tiered cans and gently expel them from the funnel into the case. At the end of the stroke the case is pushed back onto the supporting arm with one supporting plate against the case bottom and the case resting on the other supporting plate. As soon as the case is loaded, the support arm begins to descend, easing

the case into a horizontal position for removal on a roller conveyor.

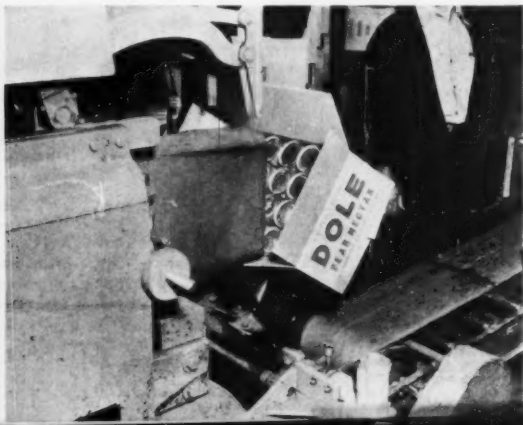
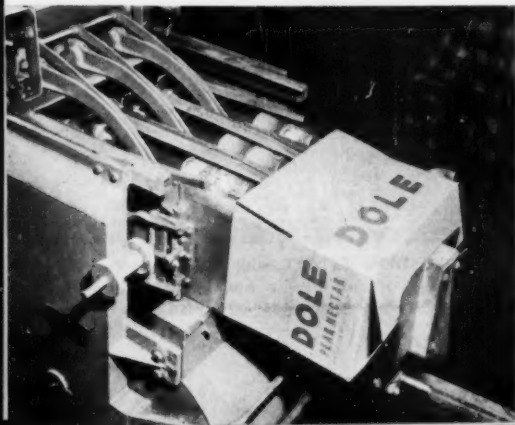
The caser is initially set to handle a given can and case size when it is installed, but only minor changes are required to re-set the machine for a smaller can with a diameter variation up to $\frac{1}{4}$ in. Cans of varying height may be cased without any change.

The model of the machines at the Barron-Gray plant can be used to case packs in one, two or three tiers with can diameters up to 211 in a 4 by 6 pattern pack, and to 404 in a 3 by 4 pattern, cans heights going up to 700. The maximum case-load size is 17 $\frac{1}{2}$ by 12 $\frac{3}{16}$ by 19 in. A larger-capacity model is also available which will handle any case load within the over-all dimensions of 20 by 12 $\frac{3}{16}$ by 19 in.

CREDIT: Case-loading machine (Model 3 Non-Shock Caser) developed and manufactured by the Sprague-Sells Div., Food Machinery & Chemical Corp., Hoopeston, Ill.

PUSHER BARS that case can rows into case are shown almost at end of stroke. They are mounted above funnel exit in retracted position during assembling cycle.

LOADED CASE begins its descent as the support arm eases it over to the horizontal position for removal from the machine onto the roller conveyor leading to the case sealer.





STRIPS of transparent cellulose tape hold securely together the free bottle of Palmolive After-Shave Lotion and the carton of Palmolive or Colgate Shaving Cream, as a convenient deal package for the consumer.

Automatically combining consumer "deal" packages with transparent pressure-sensitive tape has increased production of this item 37% for the Colgate-Palmolive-Peet Co., Jersey City, N. J. In addition, dollar savings—due to increased production—have amounted to about \$4,500 for this particular "deal" promotion campaign, the firm reports.

Responsible for these figures are a special conveyor system, one set of automatic package bundlers and cellophane tape.

Installed on each side of the conveyor track, the package bundlers automatically apply strips of tape to hold a bottle of Palmolive After Shave Lotion to individual packages of either Palmolive or Colgate Shaving Cream—combining them into a single "deal." Operated on a two-shift, 16-hr.-per-day basis, the package bundlers' average production has been approximately 2,500 completed "deals" per hour.

During production the conveying and bundling system is operated by 10 women and two men employees. Their job is to feed packages and bottles onto the conveyor tracks; regulate the flow of packages and bottles through the taping mechanism; pack finished "deals" for shipping; maintain bulk stock and renew the bundlers' tape supply.

Taping the deal

MECHANICAL BUNDLING PROVIDES STRIKING INCREASES
IN PRODUCTION AND ECONOMIES IN PACKAGING THE UNIT

mechanism after 3-in. lengths have been applied to the "deal."

During production the individual packages are guided through the taping mechanism by sets of metal pusher-blocks mounted on the conveyor track. Side rails keep the packages from tipping.

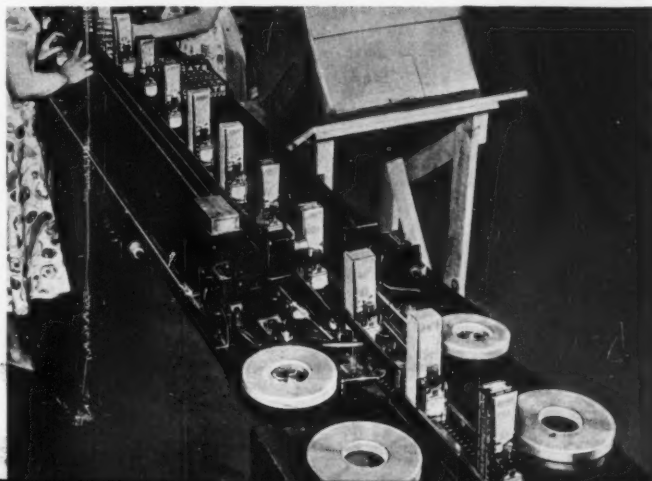
As the leading package-combination begins its passage through the bundlers' taping mechanism it is gripped by a pair of mechanical arms, which apply the tape along the package's sides. The proper length of tape is automatically severed when the next package unit on the conveyor passes through the beam of a photo-electric cell. After the cut is made the mechanical arms fall back into position automatically for the next taping operation.

The mechanical arms, over which the tape is drawn out, are attached to mountings which hold 432-yd. rolls of tape.

The firm's package bundlers were specially made by the tape supplier and adapted by Colgate's engineering staff to fit into the existing conveyor system.

CREDIT: "Scotch" brand cellophane tape and special machinery, Minnesota Mining & Mfg. Co., St. Paul, Minn.

TWO ITEMS are fed to conveyor tracks by hand. The bundling mechanism applies the tape from the front of lotion bottle to back of shaving cream carton on both sides. An electric eye cuts strips in 3-in. lengths.



Color for dairy goods

NATIONAL DAIRY SOLVES LEGAL AND PRINTING PROBLEMS TO ACHIEVE

A BRILLIANT NEW PAPER-PACKAGE FAMILY DRESSED IN ALMOST-SOLID COLOR

In its adoption of strong color usage to identify all Sealtest paper-packaged products in all of the hundreds of communities it serves throughout the East, South and Middle West, National Dairy Products Corp. is completing what is probably one of the most significant developments in the use of package design as a merchandising tool ever to be undertaken in the dairy industry.

For the first time, this program brings an appealing array of broad color surfaces to milk, ice cream and cottage cheese packages in display, establishes product identification by a systematic scheme of distinguishing colors and brings into a single unified family literally hundreds of previously widely varied package designs which can now be promoted with instant recognition in national advertising.

National Dairy Products Corp., made up of dozens of operating divisions with annual sales totaling more than \$900,000,000, is the country's biggest milkman. While most of these divisions produce under the Sealtest brand name, there never before had

been a uniform package design to associate all the products quickly with Sealtest.

Two merchandising factors instigated the search for a unified program: (1) the growing importance of the supermarket and other retail stores as outlets for dairy products; (2) a wider use of national advertising in magazines and over TV to promote Sealtest products.

The project was started with a complete redesign of Sealtest ice cream packages, appearing in August, 1950, followed by a similar unification under one basic design of all Sealtest milk and cottage cheese paper packages in a program which eventually will include all related products.

The magnitude of the project can be fully appreciated only when it is understood that dairy packages must meet the strictest legal requirements which vary widely from one community to another. For milk cartons alone, the company had to develop more than 1,000 variations of the basic design to conform to diverse local rulings. Each package had to be

submitted to local authorities—in certain instances, several times—before receiving final approval. Changes often involved nothing more than a specified type size for a local ruling; nevertheless, each one required special treatment before the printing could proceed.

In spite of this, the program has been completed in a little over a year's time, thanks to the efficient procedure established by the head office in New York, working closely with the package designer. Each local Sealtest division was supplied with a printed diagram of each package accompanied by a listing of the information required to be filled on the ruled lines of the diagram sheet. This sheet could then be turned over to the designer for preparation of the finished artwork.

Color coding of flavors is not a new principle in the ice cream industry, but Sealtest went a big step farther in incorporating a full-color vignette of a heaping dish of the ice cream, of the flavor designated, which is remarkable for its fine-screen realism and fidelity of color, considering that it is printed directly on ice-cream-carton stock. It is a striking accomplishment in appetite appeal—heretofore generally overlooked in the ice cream field.

The realistic picture of the ice cream itself gives instant identification, but in addition Sealtest has backed up the vignette with an overall background color of complementary hue on all sides of the package which is a further identification of flavor: blue for vanilla, yellow for chocolate, green for strawberry, etc. Six basic color-keyed cartons in both pint and half-gallon sizes are included.

Inspired by the success of the ice cream packages, the company next tackled the milk cartons. They sought to get away from the traditional by using broad areas of color on the cartons. This immediately created a

INTERRUPTED DEVICE of the tiled design solved the problem of permitting penetration of the wax coating for sufficient protection, which would not have been possible with the use of a solid-color background.





TILED DESIGN gives quick and immediate identity to all Sealtest packages for milk and cottage cheese. Eye-appealing colors create display excitement and, code keyed to products, make customer selection easier. Program started with the success of appetizing ice cream cartons.

technical problem, in that cartons printed with broad areas of solid color did not permit the subsequent wax coating to penetrate the paper to give sufficient protection. The "tile" or cross-hatched design was found to be the solution, giving almost the effect of solid color but leaving sufficient open area in the cross-hatch lines for adequate wax penetration.

This trim pattern has been extended as the identifying theme to all the paper packages for milk, cream, cottage cheese, butter, eggs, yogurt, egg nog and other products in the Sealtest line.

The effect of this design in achieving brand unity is best illustrated by the milk cartons. Previously there

were more than a hundred different kinds of Sealtest cartons produced for pasteurized Grade A homogenized Vitamin D milk. Now two types of cartons with the same basic design are used for all this type of Sealtest milk, with only the slight variations demanded for local legal requirements and local dairy names where used. One basic carton for chocolate milk has replaced some 47 previously used.

The package color code for the four basic milk types (all carried out with the tile motif) is as follows: bright red for Vitamin D homogenized milk; green for Grade A pasteurized; orange for buttermilk, brown for chocolate milk. These cartons provide a striking contrast when



ONE CHOCOLATE MILK carton, shown above next to traditional bottle, now takes place of this heterogeneous collection of 47 different old-style Sealtest cartons illustrated at left.





SPECIALTY PRODUCTS are all brought into family, styled for quick identification by distinctive arrangement and lettering.

displayed side-by-side in self-service cases. Clearly imprinted on the front panel of the gable and flat-top containers is the type of milk, while the Sealtest name is diagonally printed in script on all sides. Caps and hoods for the bottled milk also carry out the basic design and color schemes.

Pint and half-pint sizes of coffee cream are identified by a medium blue, while the whipping cream carton is dark blue. "Half-and-half" (half milk and half cream) cartons combine the colors for milk and cream—red and blue. Sour cream comes in a round maroon container in pint and half-pint sizes.

The same tiled motif is used for the sides of the waxed paper cups used for cottage cheese, thus bringing these products into the family,

with blue for creamed cottage cheese, green for flavored types and brown for special kinds.

Packages for specialty products such as egg nog and yogurt vary from the others in that they have stylized lettering for quick identification and the tile design is used only on certain sections of the packages. Egg nog cartons are green, red and white, while yogurt containers are blue, red and white.

Sealtest egg cartons are brightly tiled in red and white. Butter packages carry the tile design in either red and white or blue and white on the right side, leaving the remainder of the carton plain as a background for the red Sealtest trademark parallelogram.

(This article continued on page 178)

STYLE NO. 1

SEALTEST

VIT. D HOM.

CHESTNUT FARMS
Sealtest
PASTEURIZED
**VITAMIN D
HOMOGENIZED
MILK**

CHESTNUT FARMS
Sealtest
PASTEURIZED
**VITAMIN D
HOMOGENIZED
MILK**

ONE QUART LIQUID
EACH QUART CONTAINS 400 VITAMIN D
UNITS U.S.P. HOMOGENIZED EMULSION
CHESTNUT FARMS CHEVY CHASE DAIRY
PENNSYLVANIA AVE. AND 26TH ST. N.W.
WASHINGTON, D.C.

ONE QUART LIQUID
EACH QUART CONTAINS 400 VITAMIN D
UNITS U.S.P. HOMOGENIZED EMULSION
CHESTNUT FARMS CHEVY CHASE DAIRY
PENNSYLVANIA AVE. AND 26TH ST. N.W.
WASHINGTON, D.C.

© NATIONAL DAIRY PRODUCTS CORP.

IMPORTANT - FILL OUT ONE SHEET FOR EACH PRODUCT.
BE SURE TO SPECIFY SIZES OF EACH (E.G. QUART, PINT, HALF PINT, ETC.)

Please furnish copy information about your containers based on this drawing. Changes are costly and cause delays. This diagram will serve for quarts, pints and half pints.

HALF PANELS 7 AND 10. If necessary, these 2 half panels could be used for any extra copy required by local health boards. Copy in these panels should run vertically on containers since this side is split.

PANEL 2 AND 3.

① BRAND NAME - In many instances local dairy name is eliminated. (See Style Sheet No. 2)

② PRODUCTS - If possible specify pronunciation preferred for elements of this copy.

③ Specify any extra copy, as shown here, or a listing of ingredients.

④ OTHER - In some cases the word liquid has been dropped.

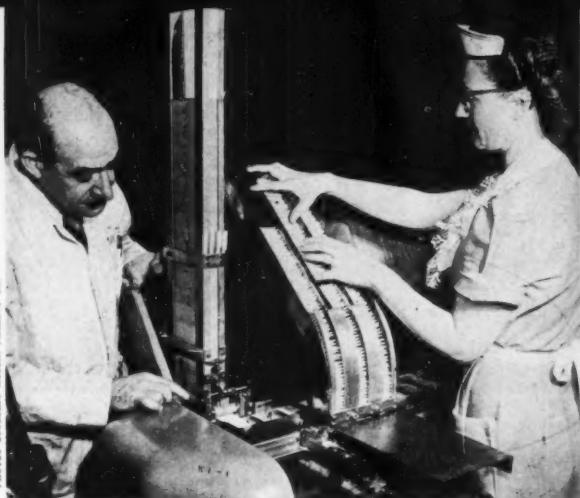
⑤ SIGNATURE - Give full corporate name and address.

PANEL 3. To keep container clean looking, it would be best not to have copy in this panel unless required by health authorities.

FOR WORD OR CAPTION -

A. Specify in as short or abbreviated form as possible, the designation preferred here.

DIAGRAM SHEETS, such as this, sent to all divisions of the National Dairy Products Corps. requesting data speeded up detailed handling of more than 1,000 different variations of the basic design to conform with diverse local rulings.



FEEDING DEVICE for cards (left) handles base cards whether curled or flat in a way that avoids jamming of overwrap machine. Attachment is adjustable to cards of any size, weight or type of board.



DISPENSING CARTON in which base cards are shipped doubles capacity of card-feed hopper and cuts the loading time by as much as 80%.

Base-card feeder

IT SOLVES A TICKLISH PROBLEM IN THE OVERWRAPPING OPERATION

AND SPEEDS PRODUCTION OF CARDED CONFECTIONERY ITEMS

The combination of a new feeding device for base cards and a new container for the cards that serves as both shipper and dispenser and doubles the capacity of the feeder's hopper has licked a recurrent packaging problem.

At the Austin Packing Co., Inc., Baltimore, Md., where the card-feeding device was first installed on overwrapping machines used in packaging the company's peanut butter sandwiches, operating efficiency has increased 25%, according to Martin Fox, vice president for production.

Another company, James P. Linnette Candy Co., Reading, Pa., reports production increased 10,000 candy bars daily with the card feeders.

The conventional card-feed mechanisms on wrapping machines often jam or fail to deliver the card properly into the pocket in-feed belt because the cards have a tendency to bow and curl. This is particularly true of the greaseproof and moisture-proof type of cards used in candy bar, cookie and cracker sandwich packages. The result is a slowdown

of the packaging line while the wrapping machine is stopped and the card feeder is worked on.

In an effort to solve this problem the engineers at Austin had made various attachments to the card-feeding mechanisms of their machines and had made some progress before the supplier of the base cards offered to put his engineering department on the job. The company was delighted and offered to test whatever was developed. The first feeder was installed about 18 months ago and Austin was so pleased with its operation that, after refinement of a few details, eight more were ordered.

The new card feeder, which may be attached to a wrapping machine as a replacement for the standard feed, is designed so that it partly pushes, partly rolls the cards into the pockets regardless of their deformation. It is also adjustable to cards of various dimensions, weights and types of board. The only alteration necessary is resetting the side plates of the loading hopper. Down time for change-over at the finish of a run is

thus reduced and the cost of an additional hopper is eliminated.

The ingenious carton dispenser for the cards was developed at the same time, evolving from the basic idea of designing a container that would hold the cards as compactly as possible and keep them flat, clean and otherwise undamaged. It functions as an accessory to the feeder by serving as a dispensing container which is actually an extension of the loading hopper, thereby increasing the capacity of the hopper. The carton (patent pending) contains approximately 1,200 base cards stacked in a single pile. It has been found at the Austin plant that the use of this carton enables the machines to run for 20 to 30 minutes without refilling and that there is an 80% saving in loading time. All the machine operator has to do is break the seal at one end of the carton, tear off the end flap and insert carton in hopper open end down.

CREDITS: Card feeder, cards and "Dispens-A-matic" carton, Gordon Cartons, Inc., Baltimore. "Wrap-O-Matic" wrapping machine, Lynch Corp., Toledo, Ohio.

Packaging's Hall of Fame®



CUTEX

NAIL POLISH

On the lawn in front of the beautiful modern cosmetic plant of the Northam Warren Corp. at Stamford, Conn., stands a tall, white flagpole. One day the French tri-color may be seen flying from the yardarm below the Stars and Stripes; on another day, the Brazilian flag, or the flag of the Union of South Africa.

Every important foreign visitor to the home plant is greeted on his arrival by the flag of his country. Northam Warren has flags for almost all of the 31 foreign countries where its products are manufactured and it will rent, borrow or make the flag of any of the 90 countries where it sells to salute the arrival of its many foreign representatives.

This flag-flying is something more

than an expression of a colorful company personality; it is dramatic evidence of the far-flung fame of the little bottle of Cutex nail polish, which, since its invention just 35 years ago, has become familiar to well-groomed women in practically every country on the face of the earth.

In the field of hand-care preparations, no other product has such a clear-cut claim to a place in *Packaging's Hall of Fame*. Cutex was not only the first liquid nail polish to be developed and packaged, but through the use of a trademarked package unit, it pioneered a field of cosmetics which has grown from virtually nothing 35 years ago to an annual volume of \$30,000,000, including liquid polishes (accounting for

\$16,000,000), polish removers, hand lotions, creams and nail implements which are daily shopping items today.

And amidst the stiffest competition—undoubtedly inspired by its own outstanding success from the beginning—Cutex maintains its enviable position as the No. 1 seller in its price range and, according to independent research, sells more than all other competitive popular-priced brands combined. Its use of the small-sized package for the dime-store trade also fostered a whole trend of mass-market merchandising of quality cosmetics in small-unit sizes.

Cutex, as the first in its field, established the basic form for nail-polish packaging, originated the principle of the brush-applicator closure, was one of the early users of molded plastic screw caps and, in general, has consistently topped its competitors in packaging achievements.

Just this year the company introduced its revolutionary Spillpruf package,* preventing any outpouring of polish if the bottle is tipped over and metering the polish to the brush to avoid excess application.

A family affair

All this grew out of the ambition of Northam Warren, the founder and still very-active president of the business he started—a business which is still very much of a family affair, with Northam Warren, Jr., as vice president and general manager.

In 1911, while secretary to the general manager of Parke, Davis & Co., Mr. Warren decided he wanted to go into the toilet-goods business on his own. To succeed in this already crowded field, he figured, would be impossible unless he selected products which at that time were rela-

TELEVISION demonstration is used effectively to dramatize the new convenience of the Spillpruf package. Commercial announcer tips bottle with a wand; not a drop spills out to ruin clothing or damage furniture.



* See "Spillpruf Nail Polish," MODERN PACKAGING, April, 1951, p. 175.

NOMINATED FOR PACKAGING'S HALL OF FAME BECAUSE:

- First and still foremost in its field, it made the world's women nail-polish conscious and opened a new \$30-million package market.
- Its exploitation of the low-price field is a classic of cosmetic merchandising.
- Ingenuities of its streamlined, mechanized packaging lines have been carried to 31 foreign countries where Cutex is made.
- With its sensational new spillproof bottle, it caps a record of continuous package improvement.

tively unimportant but subject to growth. He thought of manicure preparations. Such stores as Gimbel Bros., New York, were then devoting only a scanty few feet to such items as emery boards, nail implements and foot-treatment devices.

In a 30-by-50-ft. loft on Cliff St. in New York, Mr. Warren started putting up in small bottles an oily cuticle remover which he called Cutex because he felt there was a need for a product which would obviate the tedious and often painful process of cutting nail cuticle. The first two years were tough sledding, with just two salesmen to help put the product over. Mr. Warren, however, did not want to limit himself to one product and in 1916, when the little company was on a more stable basis and as the result of his continued study of nail-preparation markets, he added Cutex Liquid Nail Polish—a liquid varnish made from alcohol and resin, which was translucent and colorless. His belief was that women would welcome something longer lasting and easier to apply than the paste and powder polishes of that day which had to be buffed.

Record sales proved the wisdom of this venture and at the end of the first year a rose-tinted polish was added—something very startling at that time, for although the custom of coloring the nails dates back more than 5,000 years, American women had scarcely gotten away from the conservative attitude of the Victorian era in the use of cosmetics. This rose-tinted polish was the beginning of the whole trend in colored nail polishes and provided the promotional pitch for styling nail-polish colors to fashions that has kept women buying more and more packages of polish year after year.

When the quick-drying nitrocellu-



TODAY'S PACKAGES—the recently adopted 15-cent Spillproof bottle and the current 25-cent half-moon bottle with its transparent polystyrene "plume" applicator to which the spillproof feature has just been added.

lose lacquers were being developed so successfully for industry, it required little thought to decide that here was a material to make a better film-former for liquid nail polish than any previously in use. In 1922, Northam Warren introduced this new kind of polish. With this development began an expansion program which has put lacquer nail polishes among the top three or four best sellers on

the cosmetic counters and created a whole new category of packaged products.

Packaging

In the beginning Mr. Warren had no precedent for packaging his product. Only its purpose guided the selection of the container, which had to be liquid holding and sealed to prevent evaporation of a highly vola-

Earliest packages



1916

FIRST PACKAGE in the company's possession was comprised of a round glass bottle enclosed in a cylindrical wooden box, along with a quill brush and an extra cork (to use in case one got lost or broken). The wooden box was replaced by a set-up telescope box two years later in 1920.



1920

FEMININE color scheme—black and pink—replacing early red and white labels indicated trend to package with greater display appeal.



1929

EDUCATIONAL effort to get women to use liquid polish is evident by design illustrating how to apply polish with a brush.

tile preparation. The user also had to be supplied with a means for application.

The first package, still in the company's possession, was a small, round, corked bottle enclosed in a cylindrical wooden box with a separate quill brush and an extra cork (in case one got lost or broken). The wooden box,

believed necessary to prevent breakage, was made tamperproof by means of a pasted-on, red and white wrap-around label. Both the box and bottle label carried a brief description of the product's use: "For imparting an instantaneous brilliant and lasting polish to the fingernails." The trademark, "Cutex," which since has been

defended successfully against imitation in hundreds of legal cases all over the world, was prominently displayed. The top of the bottle was sealed with gelatin or sealing wax to prevent the polish from evaporating.

The first package improvement came two years later, when the product and brush were put into a rectangular set-up telescope box, not unlike many still used today in the ethical drug field. This apparently was done to obtain a faster and greater supply of boxes than was possible with the wooden container. The bottle was also changed slightly; a longer neck was provided.

The educational job of getting women to know and use the product, however, took most of the time and money at first. There were no competitors, so that the problem of counter appeal of the package had not been seriously encountered. Also, the founder believed the package should not be so revolutionary in approach that customers would shy away from the new product.

The 1920 package gives the first indication of a trend toward more attractive feminine design. The same box and bottle were used, but instead of red and white, the color scheme was changed to black and pink—predominantly black with pink for decoration. This black and pink theme was continued right through the '20s but, as may be seen by various subsequent changes, the desire

Large-size promotion



1932

METAL-STEMMED BRUSH with pony hairs was first incorporated as part of black phenolic closure on 35-cent bottle in 1932, when a square bottle replaced the old round one. Carton pack, however, had not yet been discarded. Glass container for emery boards, cotton and orangewood sticks shows some of companion Cutex hand-care products. Half-moon bottle and transparent acetate "plume" applicator were adopted for a 25-cent bottle of Cutex Nail Brilliance to meet packaging trends in 1948. This is the only large-size package promoted extensively since 1932.



1948

for more feminine appeal was gaining. The pink areas became larger with black only for contrasting embellishment and lettering. Sometime during the '20s also the set-up box was replaced by a folding carton. At one period an illustrative bull's-eye was used to demonstrate application by showing a line drawing of a pair of hands putting on the polish. This finally gave way to a simple line drawing of two beautifully manicured fingernails—still important at that time to symbolize the product's use.

The year 1931 was a very important milestone in Cutex history, for it marked the introduction of the first 10-cent bottle for sale in variety stores, then just beginning to loom in the merchandising picture as leading outlets for cosmetics. The regular-sized bottle was priced at 35 cents. The first 10-cent bottle was a smaller version of the standard round Cutex bottle and was sold in a pink and black folding carton with a stylized white flame motif, probably considered the last word in "modernistic" package design of that period.

The first really revolutionary advance in packaging was made in 1932, when the brush, then made of pony hairs and held in a metal shaft, became a permanent part of a black phenolic plastic applicator screw cap. The brush was secured by means of the peg-type design of the cap. The peg protruded on the inner side, allowing the brush shaft to fit over it with a washer drawn up to hold the brush tightly in place.

This incorporation of the brush as an integral part of the package emancipated the bottle from the carton. No longer was it necessary to have an outside unit to carry the bottle and a separate brush. They became one single bottle unit. This had a tremendous impact on variety-store merchandising. The bottles filled with various colored polishes became exciting counter display items. Consumers could see and select the colors, no longer obscured by the carton.

But if the bottles were to be seen, Northam Warren reasoned, then they would have to be more attractive. Accordingly, with the introduction of the applicator-brush cap, the company adopted a new private-mold bottle of graceful square shape enhanced by a black label with gold trim and white lettering. A tamperproof feature was a gelatin band to secure the cap and give further protection against evap-

The dime-store pitch



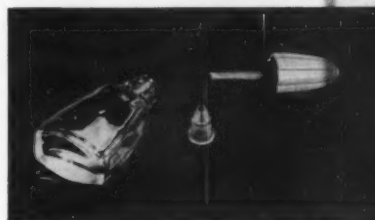
FIRST 10-CENT PACKAGE went to the five-and-tens in 1931—opening up one of the largest markets for nail preparations. The 1939 package shows bottle emancipated from carton, no longer necessary after brush became an integral part of closure. Fingernail design of cap permitted spraying with actual polish shades so consumer could see how they looked in use. Same private-mold bottle was used through 1945 with only a label change to strengthen trade name. Tapered shape was given to 1949 bottle, giving it sturdier base—the last change until Spillproof bottle.

oration. Some of these packages of the '30s still at the plant, never opened, show very little evaporation.

This was the Cutex package until 1939. By that time, a number of other changes had taken place. A new method of making opaque nail polish of creamy consistency had been developed through the use of pigments rather than dyes. During 1937 and 1938 Cutex was also beginning to feel the first effects of serious competition, with Duragloss in the five-and-tens and Revlon making a name for itself in the higher-priced field.

Among other things, Cutex met the competition with a further improved package—an improvement occasioned by the ever-growing popularity of highly styled polish colors and undoubtedly made possible by precision methods of molding plastic closures as well as the use of light-colored molding powders then just coming into wider commercial application.

The 1939 Cutex package for the first time appeared with a white urea cap—cone-shaped in form with four bas reliefs of fingernails molded around it. Each alternate fingernail was sprayed with the exact color of the polish in the bottle, so that consumers could see immediately how



SPILLPROOF FEATURE is achieved by a polyethylene insert which is friction fit over the lip of bottle and extends cone-shaped into the neck of the bottle, ending in a pliable slotted opening. This device prevents high-viscosity product from flowing through relatively small opening in relatively small bottle.

the polish would look on the hands. This package also eliminated the need for the gelatin sealing band due to the closer tolerances and better torque that could be obtained with improved plastic caps and protective vinyl cap liners.

Two improvements were made in the 10-cent bottle in 1949. The square bottle was replaced by one with sloping sides and a new cone-



COMPLETE MANICURE sets are offered annually, ranging in price from 50 cents to \$7.50. Cutex is one of the large users of cosmetic kits and cases. This \$2.50 set from 1951 collection shows trend to vinyl cases with inner tray of transparent acetate.



POINT-OF-SALE merchandising to display various shades of polish has always been one of the most important phases of advertising. This compact metal unit is currently being used for the new Spillpruf nail polish bottles.

shaped cap to provide a more modern appearance and greater convenience. Metal-stemmed brushes were replaced by new ones made with extruded polyethylene stems and nylon bristles, more efficient and easier to produce.

By the '40s the use of nail polish had become universal. Merchandising was no longer a problem of education; it was a question of brand against brand, and package features which made the product easier and safer to use became very important—for nail polish is notoriously not well adapted to the rush with which it is usually applied, a spilled bottle often meaning the ruination of a dress, a carpet or a piece of furniture.

La Cross stole a march on the field in 1948 by introducing a squat, hard-

to-tip bottle with a long-handled "plume" brush that made application easier. The advantages of this type of package were so obvious that virtually every brand immediately adopted similar put-ups. Cutex's 1948 package was particularly attractive—a private-mold bottle of inverted half-moon shape with a molded transparent polystyrene "plume."

The La Cross package was not completely spillproof, however, and Northam Warren's designers could not rest until they had bettered it. The result was the first literally spillproof bottle, which created a sensation when introduced earlier this year. The ingenious "Spillpruf" bottle can certainly be regarded as one of the outstanding package inventions of recent years.

The non-spilling device is a molded polyethylene plug which is friction fit over the lip of the bottle and extends down cone-shaped into the neck, ending in a slit, pliable opening. The relatively small opening in the plug, the high viscosity of the product and the relatively low pressure of the small amount of fluid in the bottle combine to prevent the fluid from running out. In fact, you have to shake the bottle hard before you can get a drop out and for all ordinary purposes there is ample time to right the bottle before any polish can drip to spoil clothing or furniture. The elasticity of the polyethylene acts as a squeegee for the brush applicator, allowing just enough to stay on the brush for application, thereby eliminating sticky bottle tops due to over-full, dripping

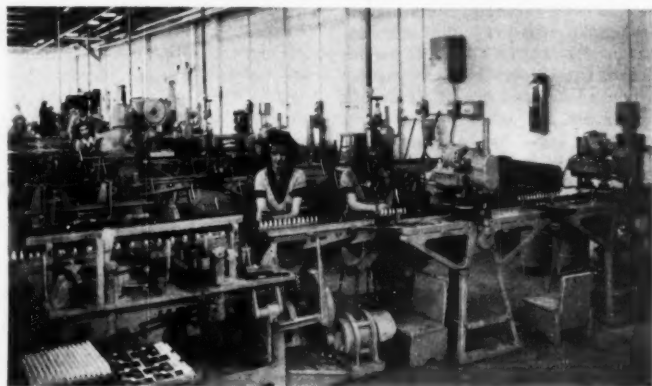
brushes. The Spillpruf feature, first introduced on a 15-cent package for variety stores, has now been incorporated into two other Cutex lines—the plume-handled 25-cent Nail Brilliance and 39-cent Pearl Brilliance.

Package production

The development of the Cutex package is also a story of progressively improved production. Mr. Warren's first bottles of liquid polish were filled with a funnel, corked, sealed, labeled and put in a wooden box by hand. As the business grew, mechanized packaging facilities were constantly added with each successive move to larger quarters—first from Cliff St. to 9 West Broadway, New York, in the building where George Loft first started to make his candy fortune; then to quarters at 114 W. 17 St.; later to a still larger plant at 191 Hudson St. and, in 1939, to the very modern Stamford plant, built specifically for the production of Cutex and other Northam Warren products.

Increasing cost of materials and labor over the past 10 years has made it increasingly necessary for the company to produce its products on a streamlined, mass-production basis in order to retain its low-price mass market. The layout of the Stamford plant is designed to require a minimum of handling through straight-line production. The carloads of raw material arrive at a receiving department at the rear and the material moves through incoming inspection to the raw-stores department, from which it flows as required through the manu-

MODERN PLANT at Stamford, Conn., is specially designed for mechanized production of cosmetics. Bottles of Cutex nail polish are filled, capped and labeled automatically at speeds of 140 to 160 per minute.



facturing process to the packaging lines.

The Cutex bottles are automatically filled on 24-head fillers, capped, caps tightened and labeled at speeds of 140 to 160 per minute on equipment, much of which was specially developed for the purpose. The equipment does the work, with operators serving chiefly as trouble watchers. The company maintains the most meticulous quality control. Bottles are checked periodically and watched for leakers. An electric eye "reads" each label to see that label and color shade agree. If they do not, the erring package is quickly rejected.

The company maintains a modern control laboratory, where not only product samples but packages are tested periodically. This laboratory also checks batch samples which must be sent regularly to the home office from the 31 foreign manufacturing operations to see that all meet the standards of the home office.

Advertising support

The best package will not sell itself. As has been true of other nominees to *Packaging's Hall of Fame*, forceful advertising and promotion has been an essential part of Cutex's package success story.

Mr. Warren, who developed his original Cutex cuticle remover because it had no competition, ran into the necessity of advertising right from the beginning. "Create a demand for it and we'll buy it," druggists said. By 1912 he had taken their advice and had run a series of small ads in New York dailies. Replies were so heavy, the Post Office checked up to see if he was filling the orders. When druggists began to clamor for the product, Mr. Warren knew he was over the hump and has been a firm believer in advertising ever since.

Each new product meant an educational program—first to make women want to use liquid polish, then to sell more polish; more educational work to get them to buy colors, then more advertising to hold markets and create new ones.

According to published estimates in the trade, the Northam Warren Corp. spent about \$500,000 last year on Cutex. A substantial portion was used for space in leading women's magazines. Over and above the national pattern, Northam Warren Corp. is using newspapers in some 44 cities to cover important metropolitan trad-



OTHER FAMOUS PRODUCTS put out by Northam Warren Corp. are Odorono, which now appears in a polyethylene spray bottle, and Peggy Sage manicure preparations, which the company has distributed since 1929.

ing areas, particularly those accounting for the highest volume in cosmetic items. Additional coverage is obtained by the use of Sunday supplements such as *American Weekly* and *This Week*. A very important phase of the advertising also is the effective point-of-sale support the company offers to dealers in the form of display merchandisers to promote the polish colors. Over a period of 30 years Northam Warren Corp., according to its own statement, has spent more money for national advertising of its nail polish than has been spent on all other brands combined.

A published figure of \$450,000 has also been given for the 1950 advertising of Odorono, a product Northam Warren purchased in 1929 which was the first liquid anti-perspirant—invented by a surgeon who had compounded it to eliminate perspiration from his hands while performing operations, tested for personal use by his daughter and her friends and bought by Mr. Warren who envisioned its possibilities. This substantial advertising figure for 1950 was to push the new Odorono spray deodorant introduced in its blue polyethylene squeeze bottle.

Since 1930 the Northam Warren Corp. has also distributed the Peggy Sage line of higher-priced manicure preparations, which gives the company complete coverage of the price field. It has increased the sale of Peggy Sage products until they too are known all over the world. An additional advertising appropriation is allocated to this line.

This year the company took its first venture into television, with the sponsorship of the Laraine Day Show. The commercial time on this program is being shared by Cutex and Odorono.

Starting on May 5, this is being seen every week in approximately 28 cities. Also, at present, the advertising schedule on the Cutex Spillpruf bottle includes spot participation in women's television programs in 12 cities. From a packaging standpoint, this use of TV is an interesting example of the possibilities of dramatic visual demonstration for putting over a new convenience feature—in this case the non-spilling bottle.

Neither packaging nor advertising alone, however, would put over a product without carefully laid merchandising programs. From the beginning Cutex has been favored with such advantages through the policies of the founder. Cutex sales are handled by the company's own staff of 30 sales representatives out of the headquarters in Stamford.

Chief distribution outlets for the Cutex line today are variety and drug stores. The merchandise is sold to the drug trade principally through wholesale druggists. At the present time the company sells to approximately 1,000 wholesalers.

Sales to the major syndicate stores are through listings with their main offices and the company sells to practically every important outlet in this type of business.

Another important outlet for this type of product is provided by the notion distributors, approximately 500 of these actually selling the Cutex line. The wholesalers, including the notion trade, have resold this famous brand of nail polish to such a degree that its distribution includes practically every town and city of the nation.

Cutex's direct retail trade, in addition to that through wholesalers, accounts for the distribution in import (This article continued on page 181)

Story-teller display card for the variety counter



Half the battle of winning sales for a new item in the housewares department of a store, particularly a variety store, is showing what the product does. The "demonstrator" for the new pie-dough lattice cutter, made by Kesco, Chicago, Ill., is the package. In this case, a carded unit provided the most efficient method. The shopper can see the product complete at a glance and the illustrations convey quickly the uses. Secondary information is presented in printed copy which is set in color patches strategically spotted around the illustrations.

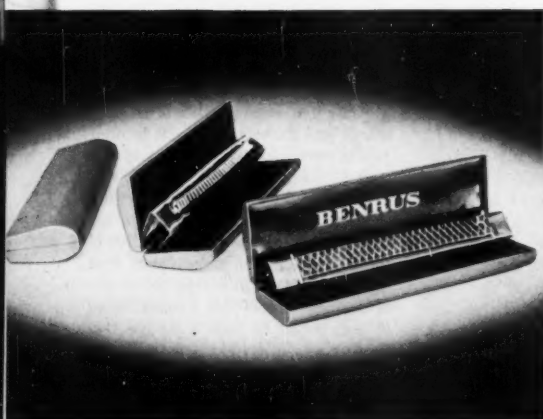
The comparatively large card necessary to tell the story also increases its effectiveness as an attention getter on the display counter.

The card is printed in four colors with blue and yellow predominating. These colors also contrast well with the red color of the polystyrene cutter.

The back of the card has a recipe and additional directions.

CREDIT: Card, Magill-Weinshiemer Co., Chicago, Ill.

Self-elevating pad in display box for watch bands



Among recent developments in jewelry packaging are containers that, although conventional in appearance from the outside, have special automatic interior constructions for displaying the contents away from the package walls once the container is opened (see MODERN PACKAGING, June, 1951, p. 88).

Benrus watchbands are among the first to be packaged in a new type of display box which is ingeniously designed so that the pad automatically rises to a display angle as the box is opened. A special feature in the pad's design (patent pending) makes it possible to use this neat, shallow and distinctively shaped box. The section of the pad that rises bridges the hinge part of the box, with each of its sides anchored inside the cover and bottom, respectively. The outer covering is a pyroxylin coated fabric.

CREDIT: Box, Farrington Mfg. Co., Boston, Mass.

HISTORIES

Yardley includes dispenser with carton of hand cream

Another example of convenience built right into the package unit is the new dispenser introduced by Yardley of London with its 6-oz. bottle of hand cream lotion. The dispenser, molded of vinyl plastic, releases just enough lotion for one hand treatment each time the top plunger part is pressed. Thus in addition to convenience, it is being promoted for economy as well, since there is no waste of lotion due to spilling or excess application. Designed with the spout extending on one side beyond the bottle shoulder, the dispenser need not be tilted in use.

The dispenser is being included in a carton with a bottle of the hand lotion selling at \$1.25.

Another convenience is the shape of the Yardley bottle—short and sturdy based—for easy placing on the bathroom shelf and to prevent tipping.

CREDITS: Dispenser made by Calmar Co., Los Angeles, Calif., using Bakelite Vinylite plastic. Bottle, Anchor Hocking Glass Corp., Lancaster, Ohio. Label, Continental Printing Co., New York.



Restyled labels add shelf appeal to canned-meat line

Armour's label design for its Pantry-Shelf line of canned meat products—now subdivided into three groups: meats, meals and spreads—has been revamped to intensify the impact of the sales presentation made by the label.

The most important innovation is a full-color illustration of the product on the front of the panel as a serving suggestion to the shopper. While the original claret red and white color scheme has been retained, now the white band is finished with a lace doily scallop design, thus emphasizing the pantry-shelf theme. The lettering for the product name has also been modified to a heavier, easier-to-read type face. Back of the label has more product "sell."

CREDITS: Design, Raymond Loewy Associates, New York. Labels, Magill-Weinsheimer Co., Chicago. Cans, Continental Can Co., New York.





Showcase package for orchids

A display-type package for Cymbidium orchids, pioneered by Armacost & Royston, Inc., West Los Angeles, Calif., which is reported to have doubled their sales of this flower last season, has now been adopted by a number of other orchid growers all over the country. The Cymbidium orchid produces many individual blooms on a long spike which is clumsy to handle and individual flowers were often damaged.

Bearing in mind that florist customers are artists at heart and therefore immediately suspicious of any "packaged deal," Armacost & Royston finally decided upon this cellophane-wrapped, open-face type of folding carton made of moistureproof paperboard as a desirable and protective package. The stem of each flower is wrapped in wet cotton and then three or four blooms are placed in the box on a bed of shredded waxed paper.

CREDITS: Carton made by Zellerbach Paper Co., Los Angeles, Calif., using DuPont cellophane.

Israeli chewing-gum packages of printed cellophane



The cosmopolitan citizens in the new state of Israel have brought with them many ideas and products from other countries. One of these, a typically American item popularized by U.S. armed forces abroad during World War I and II, is chewing gum. The product is so well established with the Israelis that it is now being made locally by "Elite," in Ramat Gan. Packages for three flavors are illustrated.

The wrappers are made of cellophane, printed in three and four colors, and supplied by an American converter. To aid the shopper in distinguishing the flavors, the design is changed on the front panel of each, although the lettering style remains the same on the sides. Oddly enough, all the copy on the package is printed in English.

Each package contains five sticks and is conventional in size and shape to the American pack.

CREDIT: Wrapper, Shellmar Products Corp., Mt. Vernon, Ohio.

HISTORIES

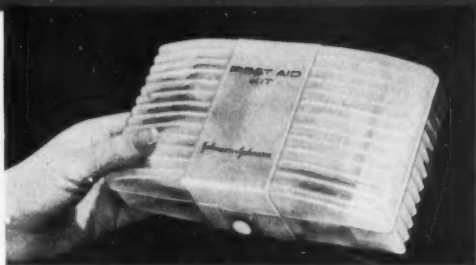
Polyethylene first-aid kit

One of Johnson & Johnson's new first-aid kits is a lightweight, unbreakable, dentproof case molded of translucent polyethylene. Designed to be kept in an automobile glove compartment—where it is noiseless despite bumps and jars—the compact, easy-to-carry case contains six of the most necessary first-aid items. The non-corrosive feature of polyethylene was one of the reasons why it was selected, since the company is also promoting the case for beach and camping trips.

The top section of the case swings open easily on an integrally molded hinge (see "Polyethylene 'Soft' Box," *MODERN PACKAGING*, March, 1949, p. 97). The case is reported to be unusually strong and rigid due to the type of buttressing and ribbing used in its design which also adds to its attractiveness.

The case has re-use value in the home, the office or the workshop.

CREDITS: Design, Egmont Arens, New York. Case molded by Auburn Button Works, Inc., Auburn, N. Y., using Bakelite polyethylene.



Gift package for assorted cheese in glass jars

The growing popularity of fine cheeses as gifts has resulted in the designing of especially attractive gift packages to contain an assortment of cheeses. An outstanding example is this one offered by Sue Ann Food Products. Named "Sportsman's Choice," the package contains a dozen personal-sized servings of the company's Cocktail Delight brand cheese spreads in small glass jars that can be re-used as shot glasses. The theme suggested by the name of the assortment is carried out in the packaging. Each of the glasses, for example, has an illustration of a different breed of dog permanently fired on the side. The glasses are fitted into a die-cut platform in the bottom of the two-piece set-up box whose decorative cover motif suggests both the name and the quality of the contents.

CREDITS: Jars, W. Braun Co., Chicago, Ill. Jar decoration, Glasscrafters, Inc., Baltimore, Md. Box, Congress Paper Box Co., Chicago. Closures, White Cap Co., Chicago.





Pan-packaged

SALES INCREASE MORE THAN

100% WITH NEW ALUMINUM

TRAY CONTAINER THAT SERVES

AS A BAKING AND SERVING DISH

CONVENIENCE of the new cellophane-wrapped aluminum tray container is promoted with the line "Heat in this aluminum pan" printed prominently in red. All the housewife has to do in preparing enchiladas for the table is remove wrap, put dish in oven and serve directly from the tray.

A newly developed aluminum-foil food tray has provided XLNT Spanish Foods Co. of Los Angeles with a happy answer to problems in housewife acceptance and distribution of their precooked beef and cheese enchiladas—and more than doubled sales as a result.

Enchiladas, a precooked dish of tortillas, chili and beef or cheese, are one of the most popular of the 18 different Spanish and Mexican food products packed and marketed by XLNT, which began as a manufacturer of tamales in 1894.

The previous package, a folding paperboard container, caused difficulties in the kitchen and in serving. The enchiladas, which are served hot, had to be transferred from the container to a baking dish or pan before being put into the oven.

This was a difficult job to do neatly. In addition, the fact that the paperboard container absorbed moisture from the product produced two other results. Some of the tasty quality of the enchiladas was lost. The bottom of the container also became soggy and, in the transfer process, the housewife tended to scrape up some bits of pulp with the food.

A year ago XLNT began a study to develop better packaging for enchiladas. Surveys of retail operators as well as of housewives themselves

showed definitely that the most desirable type of container would be a non-absorptive package in which the enchiladas could be heated and served from directly.

It was found that there were many instances where repeat sales were being lost because of the difficulties experienced with the paperboard package.

The survey indicated aluminum foil would be an ideal packaging material because it would provide a complete solution to these problems. XLNT, therefore, began working with a manufacturer of foil food containers to develop a suitable design that could be mass produced economically.

Numerous tests of various types and sizes showed that a rigid rectangular foil tray, 1 in. deep, with rounded corners would be best from the packaging and handling standpoints. Two different sizes were selected: one 7 in. long by 4½ in. wide for XLNT's three beef enchiladas and the other 7 by 3½ in. for the two cheese enchiladas.

With the foil pans XLNT uses a heat-sealed printed cellophane overwrap which displays the enchiladas. Brand name and symbol, product identification and preparation instructions are printed in eye-catching blue, red and white colors.



OVER-ALL VIEW of enchilada packing line at the Los Angeles XLNT Spanish Foods Co. plant.

Copy heavily emphasizes the aluminum-foil pan and the fact that the enchiladas can be heated in the container in which they are bought.

Printed in red, at the top of the overwrap, is the line "Special 'Heat in this aluminum pan.'" This message is repeated in the specific directions

for preparing the product provided on one side of the package.

XLNT first introduced the new aluminum-foil container in the Los Angeles market in February of this year. Both retailer and consumer response were immediate and favorable.

This success led XLNT quickly to make a complete change-over to the foil tray for packaging enchiladas. In turn, this brought another success.

Though XLNT has sold most of its products throughout California and neighboring states, the shorter shelf life of the enchiladas as previously packaged narrowed considerably the radius within which it could distribute this line, despite the fact that the enchiladas were transported in

saving has resulted because the foil tray eliminates the station on the packing line formerly devoted to setting up the paperboard packages.

Because the very nature of the enchiladas—in which some ingredients are loosely wrapped within the flat tortilla and others put on top—requires that the preparation of the packages be skillfully done by hand, XLNT has an assembly line especially set up for this product.

Nested stacks of foil pans are placed at the start of the line. First operation is placing the thin tortillas in the pans, followed by the addition of the various precooked ingredients. Final step in preparing the tasty dish is the sprinkling of a cheese garnish over the top.

Each tray is individually wrapped and the overwraps then heat sealed. Sealing across the ends of the package is completed in a heat-sealing machine.

The packages are stacked in wire baskets for delivery to retailers by the company's fleet of refrigerated trucks.

XLNT also uses a disposable foil pan for packaging its chicken pies and is planning to use various types of aluminum-foil containers for other items as a result of the success of the new enchilada trays.

CREDITS: Foil trays made by Foil Kraft, Inc., Los Angeles, using foil supplied by Kaiser Aluminum & Chemical Sales, Inc., Oakland, Calif. Printed cellophane overwraps, Milprint, Inc., Milwaukee, Wis.



STACKED TRAYS at start of assembly line. Their use eliminates need for setting-up station formerly required.



CELLOPHANE OVERWRAPS are heat sealed and then stacked in wire baskets for delivery by refrigerated trucks.

refrigerated trucks and sold from refrigerated cabinets.

It was quickly discovered that the new foil tray retained the original quality of the enchiladas much longer. This has enabled XLNT to expand its distribution of enchiladas to outlets as far as 400 miles from its Los Angeles plant.

Net result of the increased consumer acceptance and widened distribution area is that XLNT's enchilada sales have shown a gain of more than 100% and are still climbing.

Cost of the foil container itself is slightly more than that of the previous package. In practice, however, a



EMBOSSED FOIL TRAY unfilled, filled with product and overwrapped with heat-sealed printed cellophane. Tray is sturdy enough for re-use purposes.

PHOTO COURTESY ANDERSON-BENNER CORP.



BACKBONE of the new Gladiron package is expendable corrugated pallet which supports ironer in a double-wall carton. This view shows two roll-corrugated supports on the top side of pallet; there are eight more on the bottom.



PHOTO COURTESY STONE CONTAINER CORP.

IRONER IS LOWERED into the container, resting on pallet in bottom. With the package formerly used, it was necessary to metal-strap the ironer to a heavy wooden skid and then to assemble the container around the appliance.

Simplified appliance pack

THOR CORP. FINDS SUBSTANTIAL ECONOMIES IN AN ENGINEERED CONTAINER

USING CORRUGATED BOARD TO CUSHION AND SUPPORT A 75-LB. IRONER

In the packaging of its Gladiron portable home ironer, Thor Corp., Chicago, effected important economies and gained additional protection by changing from a wirebound wood-veneer box to a new package consisting of a specially designed fibreboard pallet base and a 275-lb. test, double-wall corrugated carton.

The net weight of the appliance itself is approximately 75 lbs. Gross weight for shipment to distributors in the former package was about 81½ lbs., compared with 79 lbs. in the new-type container. Packaging and shipment of the ironer are facilitated by the fact that the unit folds up compactly and the "wings" which provide a table surface are detachable to occupy a minimum of space.

The wirebound wood-veneer box formerly used for the ironer included a heavy wooden pallet-type base to which the ironer was fastened with

metal strapping. As the ironers came off the production line, two men were required to secure each unit to the base, using ¾-in. perforated strapping of 0.015 gauge. These same operators then moved the ironer along on a roller conveyor to another point where the crate was applied. Application of the crate required each man to drive six nails into place in the bottom of the container.

Ironer wings, in a separate flat corrugated container, were then placed in position beside the rest of the unit by another man, after which a fourth man placed the top on the package. Thus two teams of two men each were involved in the previous packaging operation. Actually, the services of two additional men at the end of the production line were also required to place each ironer on the wooden base before strapping.

Use of the former package in-

volved several difficulties. It was necessary, for example, to exercise extreme care in applying the metal strapping to make sure that no loose ends were exposed which might cause injury to those handling the box. In some instances nails would work loose, parts of the crate would split or the strapping would break inside the crate, leaving loose ends to strike and damage painted surfaces of the ironer.

The new package, which eliminates the need for metal banding, costs less than half as much as the old. Freight classification remains unchanged and there has been no increase in freight claims due to package failure. Through reduction of weight, freight charges have been reduced slightly. The new corrugated package, printed in red and blue, has more eye appeal and provides a better medium for printed advertising. Completely covering the ironer protects



CUSHIONING includes a layer of creped cellulose wadding around the end of the ironer and a die-cut baffle, shown above being placed into position. This helps to secure the appliance against shifting within the container.



COMPLETED PACKAGE is passed via roller conveyor through a foot-controlled power stapler, which staples both the top and the bottom simultaneously. The new package costs less than half as much as previous wooden one.

the unit against dust, dirt and rain.

A considerable labor saving resulted from the simplified packaging procedure used with the new-type container. Only two men are required to apply the package at the end of the production line. These operators take a carton off the supply stack, preshape the bottom and place the open package on a roller conveyor, after which an expendable corrugated pallet or skid is dropped into position in the bottom of the package. This unit, which forms the backbone of the package, has six circular supports—cross-sections of convolute-wound corrugated—on the lower side and two on the top which support part of the weight of the ironer.

Before the ironer is lowered into the carton, one man folds up the appliance and applies a simple securing clamp at the front which prevents the table from springing away from the stand of the unit. On the rear, side of the ironer a die-cut baffle and protective pad of cellulose wadding are placed in position. Then follows the insertion of the flat corrugated package containing the wings of the ironer; this is further held in place by a double-walled scored separator which folds down at the top.

In the concluding operation with the new package, the work ticket is

removed from the ironer and the package is put through a semi-automatic stapling machine with foot-control pedal which simultaneously applies staples to the top and bottom surfaces of the package. Eight staples are thus applied to both top and bottom to effect a secure closure, the box being manually shifted to a new position after each stitch. Operating time between staple refills was greatly increased by means of an oversized staple magazine.

Details of the new Gladiron pack-

age and the expendable pallet around which it is designed were worked out in cooperation with Thor packaging personnel by a company specializing in expendable pallets and a corrugated box supplier.

CREDITS: Corrugated pallet for new package, Addison-Semmes Corp., Racine, Wis. Corrugated boxes, Ft. Wayne Corrugated Paper Co., Chicago, and Stone Container Corp., Chicago. Creped wadding (Kimpak), Kimberly-Clark Corp., Neenah, Wis. Stapler, International Staple & Machine Co., Havertown, Pa.

COMPONENT PARTS of package and cut-away view showing how 75-lb. ironer is positioned on paperboard platform supported by corrugated rolls.

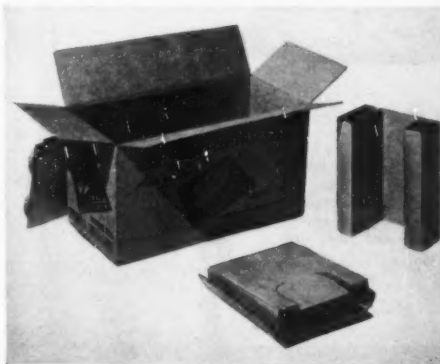


PHOTO COURTESY STONE CONTAINER CORP.

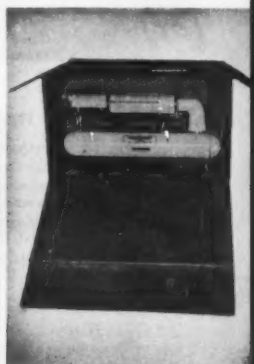


PHOTO COURTESY ADDISON-SEMME CORP.

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Good things are better in

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Packaging



Pageant



1 Adrian Stockings, Inc., New York, introduces its new line of women's hose in packages designed by the couturier, Adrian, himself. The package color scheme combines wavy gray-blue brush strokes on white with the designer's signature trademark in cherry red on both box top and bottom and inside folder. The top cover wrap is laminated acetate, with the trademark embossed. Bottom cover is spirit varnished. Inside folders are 6-lb. flax tissue lacquer coated and double scored for perfect folding. Box wraps, Donrico, Inc., New York. Boxes, Concord Paper Box Co., Charlotte, N. C. Inside folders, Whiteford Paper Co., New York.

2 Adoption of this all-aluminum container as the package for Philadelphia scrapple, enables the Weiland Packing Co., Phoenixville, Pa., to hot pack the product,

which eliminates additional handling. Use of the container is also reported to speed chilling, protect the flavor and increase the keeping quality. The crimped-on lid is printed in three colors. Container, Reynolds Metals Co., Louisville, Ky.

3 The new 20-oz. glass jar for Peter Pan brand peanut butter has an immediate appeal to convenience-minded housewives for its re-use value. The wide-mouth, large-size jar with its resealable closure makes an effective refrigerator container for leftovers. Mass displays of the new package with related snack or picnic foods are reported by grocers to have been successful sales builders. Jar, Owens-Illinois Glass Co., Toledo, Ohio. Closure, White Cap Co., Chicago. Label, U. S. Printing & Lithograph Co., Cincinnati, Ohio.

4 The toy cradle package for Virga's "Rock-A-Bye Baby" doll adds sales-getting charm plus extra enjoyment for the recipient. Made of transparent cellulose acetate and paperboard, the package has collapsible ends, so that the doll may be removed. The acetate cover allows the doll to be seen and prevents her humping cover from being soiled. Package fabricated by Acetate Box Corp., Brooklyn, N. Y., using Monsanto's "Vuepak" acetate.

5 Printed cellophane and paperboard trays are used by Lyons-Magnus, Inc., San Francisco, to package its glass fruits. The cellophane is double laminated with the design printed in reverse on the underside of the top sheet. A small area of the wrap is unprinted to give the effect of a window carton. Wraps, Shellmar Products Corp., Mt. Vernon, Ohio. Trays, Bay Cities Paper Box Co., Oakland, Calif. Wrapping machine, Package Machinery Co., Springfield, Mass.

6 New records released by RCA Victor, made from its collection of early recordings by famous singers, are packaged in albums printed with a cover design suggesting old-fashioned, velvet-covered, metal-decorated picture albums. The background color is different for each artist or collection in the series as an aid to distinguishing between albums. Album cover design, W. L. Stensgaard & Associates, Inc., Chicago, Ill.

7 M. K. Goetz Brewing Co., St. Joseph, Mo., joins the procession for improved beer packaging with the re-styling of its entire Country Club line. A handy six-bottle carrier for returnable bottles is a newcomer to the family. The family design is carried throughout the packaging from the bottle label to the largest shipping case. Six-bottle carrier, Morris Paper Mills, Chicago. Six-can carrier, Container Corp. of America, Chicago. Twelve-can carrier, Waldorf Paper Products, St. Paul, Minn., and Morris Paper Mills. Shipping containers, Gaylord Container Corp., St. Louis, Mo.

8 Park & Tilford is introducing this luxurious decanter bottle, designed to serve as a year-round gift package for its Private Stock brand whiskey. The decanter package, complete with chamfered cork-glass stopper and gift carton, is scheduled to retail at the same price as the regular package. Bottle, Owens-Illinois Glass Co., Toledo, Ohio. Stopper and closure, Dodge Cork Co., Inc., Lancaster, Pa. Label, Consolidated Lithographing Corp., Brooklyn, N. Y. Corrugated carton, Grand-City Container Corp., North Bergen, N. J.

9 Precooked, quick-frozen horse meat for household pets, prepared by Vet's Division of Perk Dog Food Co., Chicago, is now available in waxed paperboard cartons which

Packaging

may be stored in the family's freezer. Cartons are printed in two colors. Cartons, United Board & Carton Corp., Syracuse, N. Y.

10 Early Pennsylvania Dutch art provides the motif for the decorative design on the quaint tin cookie containers chosen by Megowen-Educator Food Co. as a gift package for this season's holiday trade. The design—exclusive with the company—is printed in four colors on a black lacquered background. Container designed by Pletcher & Pollack, New York, and supplied by Atlantic Can Co., New York.

11 Redesigned packages for Tidy-House Paper Products, Inc.'s household and sandwich bags feature illustrations to emphasize their uses. The serrated design at the top of the illustration area, separating this white patch from the orange background, was planned to suggest the idea of bag tops. Cartons, Berles Carton Co., Paterson, N. J., and Paramount Container Corp., New York.

12 Behr-Manning Div. of Norton Co., Troy, N. Y., has revamped the package for its abrasive-coated cloth rolls. To reduce damage to edges of the coiled strip, chip-board side-wall protectors have been enlarged. The wooden core has been replaced with a cup core made of non-allocated "waster" metal and a standard-sized arbor hole ($\frac{3}{8}$ in.) has been adopted to simplify rack storage. Core, Gray Stamping & Mfg. Co., Plano, Ill. Side-wall protectors, Robertson Paper Box Co., Montville, Conn.

13 Fiebing Chemical Co., a well-known name in the leather-finishing industry, is now introducing a retail line of liquid-wax leather dressings with the brand name "Care." The streamlined carton design is repeated on the labels of the bottles which have yellow plastic closures. Bottles and closures, Owens-Illinois Glass Co., Toledo, Ohio. Labels and cartons, Forsberg Paper Box Co., Madison, Wis.

14 Package details for the new "Sands" brand New York State wines produced and bottled by Canandaigua Industries, Inc., are planned to convey the quality of the wines. The buff antiqued paper label is printed in red and black. The red and buff colors are repeated on the cellulose sealing band over the screw-on closure. Bottle, Owens-Illinois Glass Co., Toledo, Ohio. Label, Consolidated Lithographing Corp., Brooklyn, N. Y. Cellulose sealing bands, Sylvania Div., American Viscose Corp., Philadelphia, Pa.

15 An example of the trend toward using corrugated cartons to eliminate retail-level repackaging to protect contents from breakage and to serve as display containers because of their attractive printed designs, is this line of packages for Bar Host Products Co.'s assortments of drink-mixing accessories. Containers, The Hinde & Dauch Paper Co., Sandusky, Ohio.

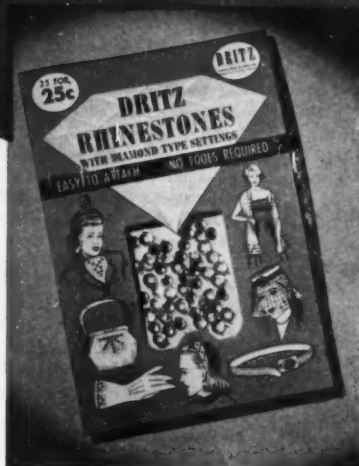
16 An unusual label redesign has been completed by A. E. Staley Mfg. Co. for its Sta-Flo liquid laundry starch. The new label is almost identical in design to the old, but the reversed color scheme, it is believed, improves readability. Label, Chicago Offset Printing Co., Chicago, Ill. Bottles and closures, Owens-Illinois Glass Co., Toledo, Ohio.



17 A small polyethylene pouch stapled inside a folded, die-cut, printed card solves a packaging problem for John Dritz & Sons, New York, who wanted to show women the colored, diamond-cut rhinestones with separate prong settings it offers for decorating veils, sweaters, etc. The translucent polyethylene permits the stones to be seen and its toughness resists tears if the sharp edges of the settings puncture it. Bags, Comet Envelope & Paper Co., Inc., New York. Cards, Print Forms Co., New York.

18 Lever Bros. has introduced a new giant-size carton containing 2 lbs., 7 oz. of Surf all-purpose detergent. The design is similar to that of the 19-oz. package. Design, Raymond Loewy Associates, New York. Cartons, Worchester Paper Box Co., Medford, Mass., and Flintkote Co. (Folding Carton Div.), Los Angeles, Calif.

Pageant



All in the



FAMILY DESIGN is provided by so simple a device as a bold white panel spotlighting product identity as on a television screen. Note the uniform placement of other label elements and legible lettering of box ends to aid salesmen.

NEW

The nation's largest line of elastic goods is now making its appearance in redesigned packages which for the first time give immediate family identity and merchandising unity to the complete group of athletic supporters, supporter belts, suspensories, abdominal belts, elastic stockings and allied products.

Through this activity, which was initiated by Bauer & Black during World War II but could not be carried out at that time because of the critical rubber situation, the manufacturer has greatly simplified the problem of the retail sales clerk as well as that of the ultimate customer. With unified, sales-stimulating package treatment, Bauer & Black has literally taken elastic goods out from behind

the counter and up front for increased sales.

Elastic goods constitute a specialized type of merchandise which obviously cannot be sold as automatically as candy bars or cigarettes. The majority of the Bauer & Black elastic supports do not lend themselves to impulse sales. Many of the items, such as elastic stockings and abdominal belts, are initially purchased on the advice of a physician. Also, in buying this type of merchandise, the customer is often uncertain about the correct style, size and usage. This means that the sales clerk must have at least a fair degree of familiarity with the products if a satisfactory sale is to be made.

The broad line of elastic supports

made by Bauer & Black now includes two styles of supporter belts, anklets, knee caps, seven different supporters, seven suspensories, seven styles of elastic stockings in four sizes, elastic bandages and abdominal belts. Company merchandising officials, in discussing their new packaging program, point out that the absence of design integration which formerly prevailed arose from the gradual addition of new items through the years without having a basic design to follow.

With the steady expansion of the Bauer & Black elastic-goods line, the identity problem became more difficult.

Each of the packages functioned as an individual rather than as a mem-

family

BAUER & BLACK THROWS OUT PACKAGE-DESIGN MAVERICKS

AND FINDS THERE IS MERCHANDISING STRENGTH IN UNITY

ber of a team. Although the Bauer & Black name appeared on all of the packages, location and type size varied widely. The fact that many of the set-up, slide-and-shell and folding packages featured a dominant trade name (Pal, Par, O-P-C) made it extremely difficult to recognize their common ancestry. Adding to the confusion was the wide range of colors and color combinations used on the various packages.

With the earlier packages, there was no single design element sufficiently strong to unify the entire line. Most of the packages were printed in two colors, divided up into rectangular areas. Some of the packages carried a line illustration of the product, but most did not. Drawings of swimmers, divers and others engaged in active sports appeared on many of the packages for supporters, but there was no uniformity of layout. In the majority of cases, printed material was confined to the display panel and the side panels; the bottom of the package was left blank. This practice permitted virtually no information for the customer on the function

of the product, how to take care of it or how to fit it.

There was one characteristic that most of the previous packages had in common—a serious display limitation. This handicap stemmed from the fact that the label and design elements on practically all of the packages ran parallel to their longer dimensions. When displayed on end, in order to conserve counter or shelf space, they were thus difficult to read without turning the head to one side. This limitation showed up most clearly when the packages were assembled in the attractive special display unit which Bauer & Black makes available to retail outlets at modest cost. When placed in this case, some of the packages could scarcely be read at all, because practically half the label was obscured by partitions in the sales unit.

This difficulty has been overcome in the new design, which was first introduced on the set-up box for abdominal belts and has now been adapted to the entire line of Bauer & Black elastic supports. Slide-and-shell packages have now been elimi-

nated and all the items are packed in either folding cartons or set-up boxes.

Essentially, the new surface design consists of a solid color background on the display face of each package, used in conjunction with a window-like white label panel resembling a television screen. The trade name and descriptive name of each item appear in this space, running across the narrow dimension of the package for more compact display utility. The label panel is so located as to bring the product name well toward the top of the carton or box, minimizing the possibility that the identity of the contents will be hidden behind other boxes when displayed.

Also featured on the display panel of each package is the Bauer & Black name, enclosed within the traditional parentheses and standing out clearly against a white band which extends around three sides of the package. A brief block of descriptive copy, in reverse white letters, is used between the label window and the encircling white band. Each end panel bears the name of the product and size information, facilitating easy selection when the packages are stacked. One of the side panels carries the phrase, "By the makers of Curity surgical dressings," while the other reads, "Bauer & Black—First in elastic supports."

Color treatment has been simplified in the new package designs, with colors reduced essentially to red, brown, blue and green on the various masculine items and pastel hues—light blue and coral—on the boxes for elastic stockings. The latter departure from the darker colors was made out of deference to feminine color preferences.

All the folding boxes are printed in one color, with the white boxboard used for contrast on reverse lettering. This procedure gives the boxes a clean-cut appearance and eliminates the extra printing operation which was formerly required on the two-color packages.

With the exception of the abdominal belts, all of the products in set-up boxes (the more costly top-

OLD



HODGE-PODGE of design in old packages left each product on its own, missed the strength of unity under the Bauer & Black name. Wide range of color combinations and the lengthwise labeling of the packages made display of the products difficult.



BACK PANELS of the new Bauer & Black packages are filled with information designed to help the clerk, or the customer himself, make the right selection. The group of top-grade items above uses set-up boxes.

quality items) employ vertical pencil stripes in white or gold to distinguish them from other products in the elastic-goods group. The stripes, although not so pronounced as to interfere with the uniform appearance of the entire line of packages, serve as a distinguishing mark of the highest quality items in the line. Gold is also used on the set-up boxes around the frame of the label window.

A complete departure from the earlier packages is the treatment of the bottom or back panel of the boxes, which was formerly left blank or carried only the name of the item. On the new packages, this panel has been designed to do a complete job of silent selling. At the top, it now carries the name of the product and a line-drawing illustration, against a background formed by extending the all-over color to the bottom of the package. This is followed by descriptive copy explaining the features of the product and instructions for use, laundering, etc. On some of the items (abdominal belts) there are additional illustrations showing how the product should be applied and laced for proper fit. Finally, the bottom or back panel of each new package lists the other items available in the Bauer & Black line.

This new feature of the Bauer &

Black packages is regarded as particularly important in the trend to self-service merchandising. Even if a sales clerk is not immediately available, the prospective customer can now acquaint himself with the features of the product and select the correct

size. Also, through coordinated display, he becomes at least generally familiar with the other items in the line, making him more likely to request a Bauer & Black product if he should need other types of elastic goods in the future. By means of the new information panel, Bauer & Black has saved valuable time for both the clerk and the customer and helped to insure correct fit and use of the products.

The new redesign program includes some minor standardization of box sizes for improved stocking and display.

The permanent display unit available from the manufacturer provides the retailer with a complete elastic-goods department in open display and occupies only 6 sq. ft. of floor space. Of natural-finish maple, the unit has a top panel with fluorescent lighting displaying sample elastic-goods items against a maroon background. Prices are clearly shown on the front of each tier of packages. The unit is stocked from a lower compartment with sliding glass doors, affording the retailer an immediate and continuous inventory check.

CREDITS: Basic package redesign, Ernst A. Spuehler, Chicago. Folding cartons, Ace Carton Corp., Chicago. Set-up boxes, Terre Paper Box Co., Chicago. Retail sales and display unit, C. D. Baird Co., Milwaukee.

COMPACT display case shows effectiveness of new design in mass display, emphasizing brand identity.



Antibiotic tester

CONVENIENT MULTIPLE PACKAGE FOR DIAGNOSTIC TABLETS ASSURES

ACCURATE LABORATORY METHOD OF SELECTION

A set of test tablets of the six most commonly used antibiotics has been packaged as a convenient unit by C.S.C. Pharmaceuticals, a division of Commercial Solvents Corp., to aid physicians in determining quickly and accurately the most effective antibiotic to use against a specific infection in a patient.

The package consists of a large paperboard carrier box into which fit 12 individual set-up boxes, each containing 24 of the "Dia-Discs"—the trademark name for the diagnostic test tablets. Although only six antibiotics are included—Penicillin, Bacitracin, Streptomycin, Chloromycetin (chloramphenicol, Park, Davis & Co.), Aureomycin and Terramycin—two potencies of each are supplied to assure accuracy over the entire range of sensitivity, thus making the total of 12 boxes. The package also contains a sensitivity chart which enables the tester to interpret the findings he observes and a pad of laboratory report slips.

The entire package has been designed to meet the needs of the laboratory technician or doctor making the test. A brief explanation of the test will help to make this clearer. The test consists of putting up to six tablets on a Petri plate containing agar which has been streaked with the test organism. The plate is then incubated overnight and, by measuring the diameter of the inhibition zone around each tablet, an accurate indication is given of the organism's qualitative and quantitative sensitivity to the antibiotics.

To provide an easy means of removing the individual tablets and also to protect them against bacterial and antibiotic contamination, they are unit packaged in Pliofilm. The technician merely snips off one corner of the individual film square and withdraws the tablet with a forceps.

Since it is important that each tablet be readily identified throughout the test, one number is impressed on



CARRIER BOX contains 12 individual boxes including two potencies of the six most commonly used antibiotics. To assure identity, numbers on each box are "coded" to corresponding numbers impressed on the tablets in each box. Pliofilm unit packages protect against contamination.

the tablets in each group and this number corresponds with the one conspicuously printed on the labels of the 12 boxes. The "code" is also printed on the side of the carrier box as may be seen in the accompanying illustration.

The numbers are also given the most prominent position on the end panels of the individual boxes inasmuch as the boxes are fitted into the carrier on the narrow side to save space.

The paper labels are positioned on the two-piece, full-telescoping boxes so that they seal the boxes on the two narrow ends. This gives the technician assurance that he is receiving complete counts; a box with the label seal broken immediately indi-

cates that some of the tablets may have been used.

At C.S.C.'s plant where the package is assembled, the tablets are unit packaged automatically in strips of 24. All parts of this packaging machine that come into contact with the tablets are thoroughly cleaned between lots to avoid dust from one antibiotic carrying over to another. The unit-packaged tablets are inspected by hand and the numbers on the tablets are carefully checked for identity before the final packaging and labeling.

CREDITS: Set-up boxes and carriers, Terre Paper Box Co., Chicago. Labels, Unique Printed Products Co., Inc., Terre Haute, Ind. Unit-packaging machine, Arthur Colton Co., Div. Snyder Tool & Engineering Co., Detroit, Mich.



Sporting-goods dealers report this three-dimensional, four-color display used by Uncle Josh Bait Co., Ft. Atkinson, Wis., "catches" customers with its humorous appeal. The product is suspended at the end of the line, which is real string. Letterpress printed, the unit measures 11½ in. high. Display, Milprint, Inc., Milwaukee, Wis.



"Small Frys" midget doughnuts, distributed by Confections, Inc., Chicago, became an interesting new snack item packaged in printed cellophane bags and a counter display carton appropriately designed for impulse selling. Printed cellophane bags, Champion Bag Co., Chicago. Display, Ace Carton Co., Chicago.



Despite its small size—it takes up only 7 in. of counter space—this display has ample room to show both a box of Hotchkiss staples and the Bantam stapler offered at a special combination price. Copy is printed in bright red and black to set off the soft gray and chrome of the stapler. Display, Brooks Mfg., Inc., South Norwalk, Conn.

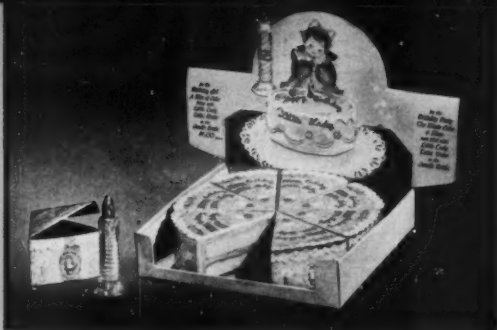
A simple way to demonstrate the use of a new product is illustrated by this easel display card, die cut to hold Simmons Kit Co.'s "Tu-B-Tec" polyethylene tooth-brush protectors, a convenient item for travel, developed and molded by Shaw Insulator Co. An actual case slipped over a die-cut picture of a tooth brush shows the device in use, while a picture of a hand pulling it out shows how the brush is removed. Display, Star Sample Card Co., New York.



A flashlight battery powers the wig-wagging navy signalman in F. & M. Schaefer Brewing Co.'s new motion displays—one using an actual bottle in a slot, the other for bars with an illustration of a foamy glass. Both are paperboard lithographed in eight colors. Display, Elnson-Freeman Co., Inc., Long Island City, N. Y.



Designed for compactness and convenience, the new Co-ets counter display holds nine large packages or 13 small ones. A special display package with an acetate window is mounted on the backboard panel so shoppers may see the product. Design, Charles Magers, Princeton, N. J. Display, Ketterlinus Lithographic Co., New York. Cartons, Lord Baltimore Press, Baltimore, Md.



Each "slice" of Helene Ross's birthday cake is a triangular gift carton for Little Lady toilet water in a "candle" bottle. Eight wedge-shaped cartons complete the "cake" for display or party favors. Outer box and cartons, Pioneer Folding Box Co., Chicopee, Mass. Bottles, W. Braun Co., Chicago.



This tooth-brush "tree," displaying a complete assortment of Squibb brushes and dental cream, which literally grew in Brooklyn, is designed to give retailers a new meaning to the old saying, "Money grows on trees." Made of paper-board, it measures 4 in. wide, 18½ in. high and 9 in. deep. Display, Dorsey Display Corp., New York.



Tintair's window and counter display is designed to build impulse sales by promoting associated items that a woman usually takes with her on a vacation, as suggested by the "check list" featured on the side cards of the unit. Bymart, Inc., the manufacturer of this home hair coloring, reports that the number of dealer requests for this display has been exceptionally large. Display, Einson-Freeman Co., Inc., Long Island City, N. Y.

DISPLAY GALLERY

The demonstrator-type display used by the Central States Paper & Bag Co., St. Louis, Mo., to show how the "Scrap-Trap" holder for its packaged garbage bags operates, features the actual product attached to the stand, which is made of Masonite. The message printed on the stand in red and white stresses the "no odor, no mess" features of the metal holder and disposable kraft bags.



Boxed potatoes

OREGON STUDY INDICATES THAT PHYSICAL
DAMAGE IN SHIPPING CAN BE GREATLY CUT
BY USE OF 50-LB. CORRUGATED CONTAINER

A better method of packing potatoes to minimize in-transit damage from grower to consumer has been the object of packaging-marketing studies during the past 18 months in Oregon.

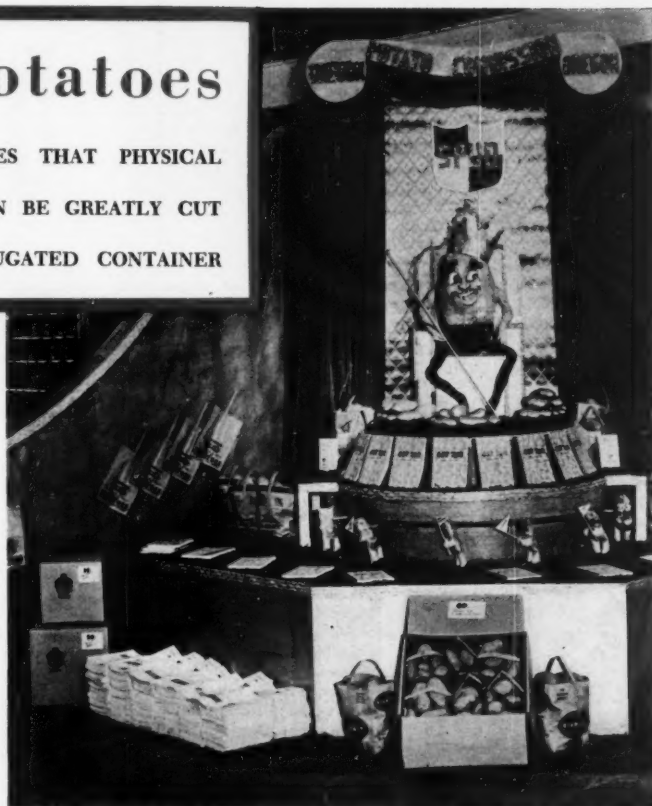
Preliminary findings indicate that traditional packs eventually may be replaced by corrugated fibreboard shipping boxes reported to cost no more than conventional containers, to provide greater protection, more convenient handling and product brand identification.

The studies are the outgrowth of a number of activities initiated by potato-grower associations in Oregon as a positive approach to a problem facing the entire potato industry. The project was aided by the Oregon Potato Commission, established by the Oregon State Legislature in 1949, under the direction of Ben Davidson, administrator of the Commission.

Research funds were made available by the Commission in the spring of 1950 to the Klamath Potato Growers Assn. for the purpose of developing a master shipping carton to hold consumer-sized paper-bagged potatoes. Several years previously a 10-lb. carrier carton, introduced by one Oregon potato-marketing cooperative had aroused considerable interest.

Klamath growers made their first test of four carload lots shipped in an 80-lb. corrugated container holding eight 10-lb. paper bags. Consumer acceptance of this type of package was good, it was reported, but terminal market reaction was less favorable.

Concurrently with this study, Oregon State College and the University of Idaho, cooperating with the U. S. Bureau of Agriculture Economics and federal-state shipping agencies, also had a research program in progress to



THREE of the four containers used in the major test displayed in the Oregon Potato Commission booth at the recent state fair. The 25- and 50-lb. bulk containers are at left, while 60-lb. master shipper with six 10-lb. consumer unit packages is in the center; 100-lb. size is not shown above.

follow potato marketing from shipping points to terminal markets.

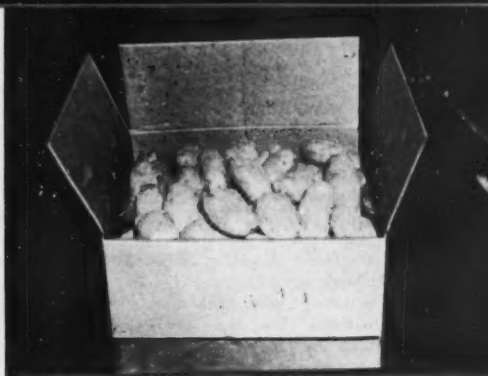
Last fall when the supply of burlap became uncertain due to the Far Eastern situation, the Oregon Potato Commission asked Oregon State College and the U. S. Bureau of Agriculture Economics to team up in the container study, offering to supply part of the funds. The result was a study combining the efforts of all, the findings of which will be published soon in bulletin form.

Four types and sizes of shipping containers were used in these tests made during the past shipping season:

1. A 60-lb., 200-lb.-test corrugated master shipper, measuring 10 by 16 by 17½ in., containing six 10-lb. consumer units (paper bagged). Total cost of the materials for this package



CLOSE-UP of 60-lb. master shipper with its six 10-lb. "Home-toter" bags. This picture was taken three days after the container arrived at the Pacific Fruit Co.'s terminal in Portland.



REDESIGNED 50-lb. containers after their arrival at United Fruit & Produce warehouse in Portland. Box on the left is fitted with liners; box at the right is unlined. Both of them are made of 275-lb. test corrugated board.

was 29 cents–20 cents for the container and 1.5 cents per bag,

2. A 50-lb. bulk container of 200-test corrugated, measuring 13 by 13 by 12 in., which cost 16 cents,

3. A 25-lb. bulk container, also 200-test, measuring 10 by 10 by 10 in., costing 11 cents,

4. A 100-lb. bulk container of 350-test corrugated, measuring 12 by 14 by 28 in., that cost 56 cents.

Because potatoes are a comparatively low-priced commodity, the cost of the containers is an important consideration. Compared with the conventional burlap sack, only the 50-lb. container was comparable on a cost basis. Conventional 50-, 25-, 15- and

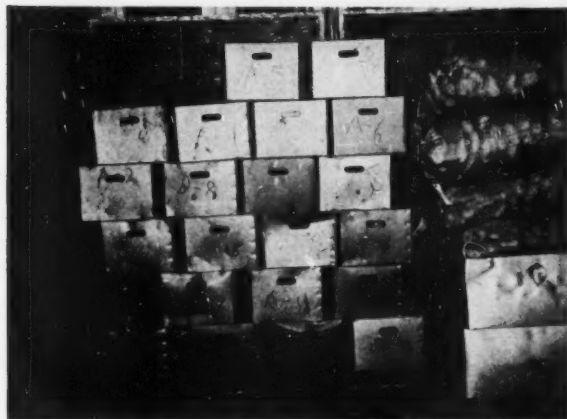
10-lb. paper bags range from the same price as a 100-lb. burlap sack (30 to 35 cents) to as much as 80 cents per hundred for open-mesh-type bags.

The test shipments in carload lots were sent from two potato-producing areas in the state to two terminal markets; one in Portland, Ore., the other in the San Francisco Bay area, during February, 1951. The condition of the potato packages was checked at the loading and receiving points to determine in-transit damage. Prof. George B. Davis of Oregon State College was in charge of this phase of the study. Representatives from the Bureau of Agriculture Economics

also worked with Prof. Davis' group.

The condition of the commodity in the four types of test containers upon their delivery to the terminal markets was reported as follows in the preliminary tabulations: The cartoned potatoes arrived with less than 1% total physical damage. In contrast, physical damage to the potatoes shipped in conventional packages varied from 2% to 15%, depending upon the materials, the labor handling the commodity, the type of transportation used and other factors. Additional damage to potatoes packed in conventional containers, it is reported, often runs as high as 25% by the time they reach the retail

LAST TEST SHIPMENT to be made shown on its arrival in Portland. It included the redesigned 50-lb., 275-test containers (cartons marked "A" have liners and ones marked "B" are unlined); two 100-lb. containers are illustrated at the lower right and on top of these are several conventional 100-lb. burlap-bagged potatoes.



FILLING OPERATIONS at Central Oregon Potato Growers Assn. plant, indicated that corrugated cartons are easier to handle than the conventional potato packs. To facilitate handling, containers have die-cut slot grips in each end near top.



grocer, but it should be pointed out that this is not all in-transit damage.

While the tests showed that this substantial reduction in product damage can be effected by the use of rigid containers as the bulk shipping package for potatoes, they also indicated the types of container failure that may occur. Buckling and side-wall collapse were the most common types of damage listed in the preliminary findings. These were found to be caused by uneven weight distribution, moisture absorption and too light-weight corrugated board.

To eliminate these causes of carton failure, the 50-lb. bulk container, which appears to be the most practical from an economic standpoint, has been redesigned.

The new 50-lb. container, which was used in a few test shipments last April from the Central Oregon Potato Growers Assn. plant in Redmond, Ore., to United Fruit & Produce in Portland, is more rigid and easier to handle. The weight of the corrugated has been increased to 275-lb. test and liners have been added. The dimen-

sions of the new container are rectangular instead of being made cube shaped, as previously.

To facilitate handling, the container has die-cut slot grips in each end near the top. It is believed that the new carton measurements (10 by 13 by 16 in.), combined with the greater rigidity, provide a better distribution of weight, thereby overcoming some of the objection to handling raised by terminal market labor.

Obviously, the new container is more expensive (with liners it costs 32 cents; without liners, 23 cents), but its added strength and protection, it is anticipated, should offset the cost differential in actual use. Eventually, it is hoped that a 200-lb.-test container made of impregnated corrugated board will be available to eliminate the problem of moisture absorption. This would assure sufficient rigidity with a lower-test board and thereby reduce the cost considerably.

The test projects also indicated that filling and loading at the growers' plants were easier and less expensive

with the corrugated fibre boxes than with burlap bags.

The feasibility of potato pre-packaging at the grower level is another aspect of the problem which the Commission hopes will also be studied.

In review, the preliminary findings of the Oregon potato-package studies indicate that in-transit physical damage to potatoes is reduced greatly when rigid corrugated shipping containers are used.

The research program's findings to date have shown that a container holding 50 lbs. of potatoes in bulk is the most practical from a cost standpoint, comparing favorably with the cost of the burlap sack. Finally, as a result of the first tests, the original design of this size carton has been modified to improve the rigidity and handling ease.

CREDITS: Shipping cartons, Gaylord Container Corp., St. Louis, Mo., and Fibre-board Products, Inc., San Francisco, Calif. Paper bags, Zellerbach Paper Co., Div. of Crown-Zellerbach Corp., San Francisco, Calif.



LOADING ARRANGEMENTS used on original 50-lb. bulk containers as they were assembled at the Redmond plant. Above: staggered tier and vertical tier. Below: vertical tier load upon arrival at Portland (notice buckled walls) and pallet load three days after arrival at Portland. Moistureproofed board would reduce buckling, it is believed.



for sparkling printing

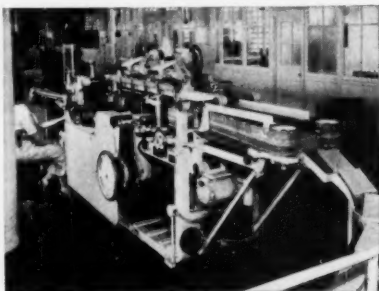
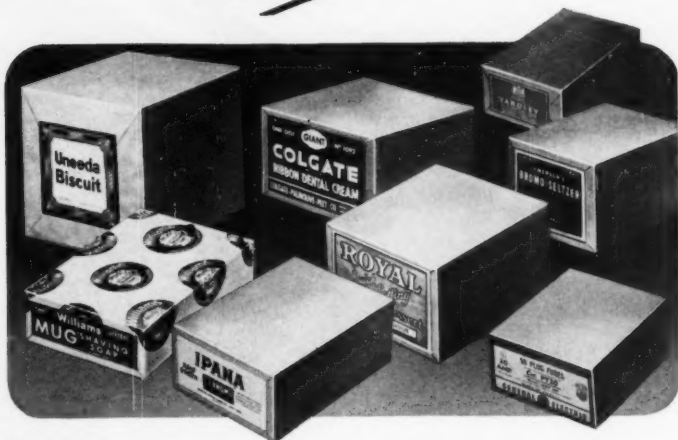
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Saran-coated paper

IT OFFERS A NEW WAY OF USING THE EXCELLENT PACKAGING PROPERTIES
OF THIS PLASTIC AT LOWER COST. By L. M. Burgess*

Investigators in the field of plastic coatings have long been aware of the desirability of producing a coated paper having excellent chemical resistance and low water-vapor and gas transmission as well as good heat sealability. In the field of free films an oriented saran (vinylidene chloride copolymer) product which fulfills these qualifications has been on the market for several years.

For uses requiring a paper backing, this film has been laminated to paper. Laminations where the unsupported film is mounted to paper by means of an adhesive are, because of the extra operations involved, quite costly. They are, therefore, limited in usefulness to special cases where the high strength of the oriented film and the lack of fibre penetration are desirable. Therefore, some means of directly coating the resin onto paper was indicated. Solution coating was out of the question because of the extreme solvent resistance of this resin. Other saran resins of the more soluble type did not possess the superior qualities desired. Coating from latex systems has also been used, but again the products obtained do not have the excellent chemical resistance and barrier properties of the extruded free films.

It was apparent then that a hot-melt coating process would be required. Although several years ago Dow engineers had succeeded in

coating a small quantity of paper, it was not till early 1950 that their technique was developed to the point of submitting samples to the paper-coating industry. The properties of these samples were such as to encourage the H. P. Smith Paper Co. to enter into a development program. Smith engineers would design and build a machine similar to their polyethylene "Loxol" unit, but expressly for the hot-melt coating of saran, while Dow would design high-capacity extrusion and melting equipment and make resin-handling techniques available.

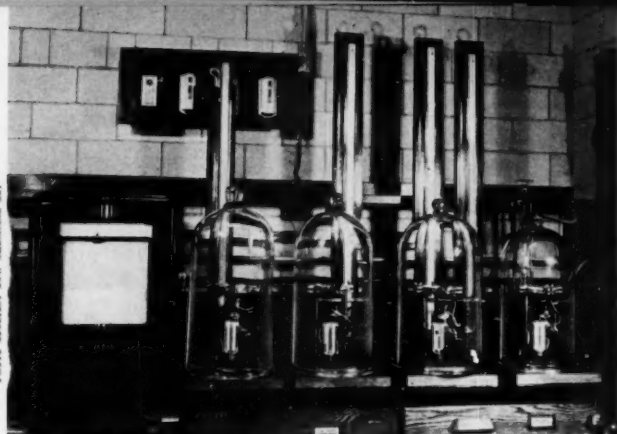
In order to coat the resin, it is first melted by means of an extruder. This extruder has been previously described in the literature. Because of the heat sensitivity of saran, certain precautions must be observed in the melting operation. The screw has single, relatively shallow flights and increases in root diameter to develop pressure. All metals which have a catalytic effect upon the decomposition of saran are avoided. Briefly, because saran has a relatively short thermal life, dependent upon time and temperature, every effort is made

HEAT-SEALING MACHINE forming pouches made of saran-coated paper.

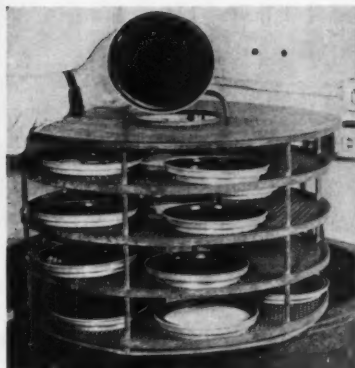


PHOTO COURTESY DOW CHEMICAL CO.

* Field Sales Engineer, H. P. Smith Paper Co., Chicago.



GAS TRANSMISSION tests run at 23 deg. C. showed that saran-coated paper compared favorably with extruded oriented film made from a similar resin. The type of resin will have some effect on gas permeability.



WATER-VAPOR transmission rates were low and the tests showed that the rate decreases with the aging of the coated paper.

to keep the resin inventory time in the extruder low by moving it rapidly through the extruder. Steam is used to heat the extruder in order to bring the resin rapidly to temperature at the start of operation and to cool the resin quickly for shut-downs.

The resin, which has by means of this special extruder been brought to a temperature of between 325-350 deg. F., is applied directly to a paper which has been previously dried to remove surface moisture and preheated to prevent cooling of the resin during the coating operation. The molten mass of resin, which at this temperature is viscous but not self supporting, is by a variation of the well known knife-coating technique metered to the desired thickness. By this means continuous coatings are applied to paper from thicknesses as low as 1 mil to as high as 10 mils. This paper coated with the molten saran is now ready for the finishing operation.

Saran is normally a crystalline material which is free of tack and resistant to blocking. When melted as in the paper-coating process it becomes amorphous and tacky. Upon recrystallization it again becomes non-tacky. In order to avoid blocking in the wind-up roll it is, therefore, desirable to promote crystallization as rapidly as possible after coating. Contrary to the case with most plastics, this is accomplished best in a heated medium. Therefore, a hot-air oven is used in place of the usual refrigerated roll.

Properties

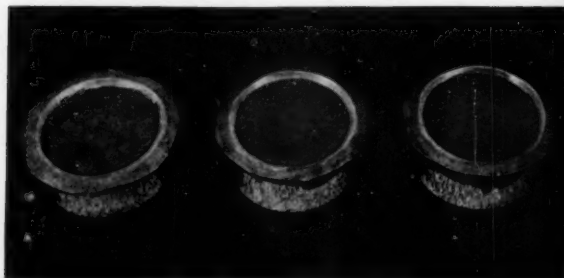
Under the proper conditions paper hot-melt coated with saran has many of the properties characteristic of the extruded oriented saran-free film. It will be shown further wherein its advantages and disadvantages lie compared with the film as well as to some of the other plastic-coated papers.

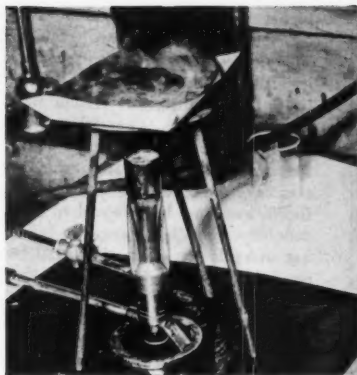
Saran-coated paper is superior to

the film in the ease with which it can be fabricated on existing heat-sealing equipment. The coated paper does not shrink and does not stick to the sealing jaws. In fact, it is only necessary to follow the four factors which govern the sealing of any heat-seal coated paper. The factors necessary to effect a good seal are temperature, dwell time, paper thickness and pressure. Saran-coated paper (60 lb. kraft 1.5 mil coating) seals on a laboratory jaw sealer at 375-385 deg. F. with 15-lb. pressure and a dwell time of one second. It is necessary to have a sufficient quantity of heat in the sealing bars to overcome the insulating value of the paper which is, of course, proportional to its thickness. The best sealing results are obtained by proceeding in the following way.

First, the edges of the sealing bar should be honed about 1-2 thousandths of an inch, to remove the sharp edge and prevent the bar from cutting or scoring the sheet when a

THREE WVT CUPS shown below are covered with saran-coated paper and filled with a desiccant, ready for testing water-vapor transmission rate in GF humidity cabinet illustrated at the left.





BOILING-WATER TESTS which were conducted indicated that the samples tested had good resistance to the action of heat.



SOLVENT AND ACID resistance of saran-coated paper was demonstrated by subjecting the samples to rigid tests.



RESISTANCE TO OILS and greases of many types indicated its suitability as a wrap for machine parts.

high sealing pressure is used. Wherever possible the seal bar should be about $\frac{1}{2}$ of an inch inside the outer edge of the pouch. These two precautions should be followed to pre-

vent exudation of the plastic onto the sealing bars. Exudation may also be limited by limiting the distance to which the jaws close. The sealing bars should be kept at about 420 deg.

F. to overcome the heat loss caused by the cold paper and to melt the plastic. Sealing should be against a resilient lower bar. This cushion may be obtained through the use of Teflon sheeting or a Teflon-impregnated glass cloth. This permits the lower jaw to conform to the paper and compensates for any heat distortion in the top bar. It is well to keep pressures to the high side and in most cases 15-20 lb./in. is sufficient, depending on the thickness of the paper. Seals should never be cooled. Rapid chilling causes the resin coating to become amorphous, while slow cooling permits the resin to develop its crystallinity. For this reason seals should be checked after the pouch has cooled.

Pouches can be made having excellent seals and at high rates of production by following these general specifications, which are set down only to serve as a starting point. It is quite obvious that they will frequently have to be varied to conform to the variations in equipment and in the paper-backing stock used.

Saran-coated paper has a gas transmission rate which compares favorably with extruded oriented film made from a similar resin.

Gas	cc./100 sq. in./24 hrs.
Oxygen	0.1
Nitrogen	0.025
Carbon dioxide	0.30

These gases were dry and the test was run at 23 deg. C. The resin coating was approximately 1.5 mils in thickness. It is expected that the gas permeability of the coated paper will

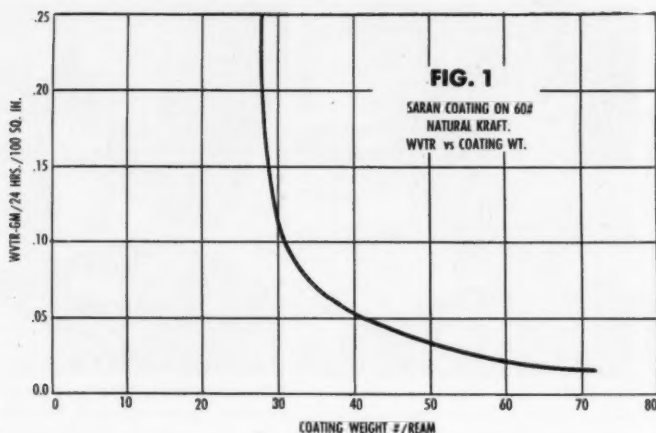
TABLE I — SUMMARY OF PROPERTIES

	Polyethylene	Vinyl copolymer VB 1925 Natural	Saran
Specific gravity	0.92	1.27	1.68
Area factor—sq. in./lb. 1 mil	30,000	20,000	16,300
Water-vapor transmission g./100 sq. in./24 hrs. 90 R.H. 100 deg. F. 1.5 mils of coating (fresh samples)	0.75	2.7	0.15
Resistance to cold	—75 deg. F.	—2 deg. F.	0 deg. F.
Resistance to heat (non- blocking)	175 deg. F.	210 deg. F.	250 deg. F.
Resistance to solvents	Insoluble cold, but soluble in aliphatics and aromatics above 160 deg. F.	Soluble in ketones, in- soluble in alcohols and aromatics	Insoluble in most com- mercial sol- vents. Solu- ble in a few above 250 deg. F.
Resistance to grease and oils	Slight permea- tion 285-300 deg. F.	No permea- tion 220-280 deg. F.	No permea- tion 375-425 deg. F.
Heat sealing			
Gas transmission cc./100 sq. in./24 hrs. 23 deg. C.			
Oxygen	50*	55*	0.10*
Nitrogen	8	13	0.025
Carbon dioxide	160	290	0.30

* 1.5 mils on kraft.

* Films only.

* 1.5 mils on kraft.



be approximately inversely proportional to the thickness of the coating. It will be well to note also that the type of resin will have some effect on gas permeability.

Another remarkable property of saran-coated paper is its great resistance to water-vapor permeation. The rate of water-vapor permeability is about $\frac{1}{3}$ of that of a polyethylene-coated sheet of equivalent coating thickness. It has the lowest rate of water-vapor transmission per mil of thickness of any commercial thermoplastic resin. The water-vapor transmission rate decreases by approximately $\frac{1}{3}$ for every 13 deg. F. that the exposure temperature is lowered.

One further remarkable property pertaining to the water-vapor transmission rate is the decrease of the rate with aging. This decrease is apparently associated with the greater crystallinity of the film on aging and to some loss of plasticizer. Freshly coated samples show a water-vapor

transmission rate of between 0.18-0.12 g./100 sq. in./24 hrs. at 95 R.H. and 100 deg. F. for coatings between 1.5 mils-2 mils in thickness. However, when the method outlined in paragraph F4a of the government specification JAN-P-117 is used, which includes an accelerated aging test at 140 deg. F. prior to determining the water-vapor transmission rate, a very marked decrease in this rate is evident. The graph (Fig. 1) illustrates the rate of water-vapor transmission with respect to the saran coating weight. The decrease in rate of water-vapor transmission between unaged samples and samples subjected to this accelerated treatment has been as great as 100%.

Saran-coated paper has remarkable solvent resistance. It can be dissolved in only a few solvents and, with the exception of tetrahydro furan, these must be hot and the resin concentration must be low. Some of these solvents are ortho-dichlorobenzene, dioxane, cyclohexanone and isophorone. A few others will cause softening at elevated temperatures.

The chemical resistance of the coated paper is high. Alkalies such as ammonia soften and discolor the coated resin, but most other bases do not affect it. The resistance to acids is excellent. Here, too, no variation is expected in the coated paper from that already found in the film.

Saran resin coated onto paper improves the physical properties of the paper. These properties are improved further as the paper ages. The tear strength, tensile strength and bursting strength are appreciably

higher in coated paper several weeks old than in freshly coated samples. This increase is undoubtedly again associated with the tendency of the resin to become more crystalline with aging. Laboratory tests show that bursting strength, tear and tensile strength increase in value with increases in the coating weight of saran. Insufficient time has elapsed to state definitely what the increase in bursting strength per square inch will be per pound of resin coating, and also what the increases will be after several months of aging. At the present time it is well established that such physical properties as the tearing strength, bursting strength and tensile strength are increased by coating the paper with saran and that aging further improves these same strength characteristics.

Under normal aging conditions neither the saran nor the paper backing will embrittle. Continued exposure at elevated temperatures may result in a slight embrittlement.

Saran-coated paper is flexible and tough at room temperature. As the temperature is lowered it becomes progressively less flexible and at temperatures below 0 deg. F. becomes rather brittle. Considerable work is being done to improve this property.

Because of its excellent water-vapor and grease resistance and heat sealability, saran-coated paper has had wide acceptance in the industrial packaging field. It is qualified under JAN-P-117 for Grade A, Class d, and is used in pouch form for the packaging of small ordnance parts where Method 1A-3 or 1A-8 is acceptable.

For this combined government and industrial use, the resin is colored black and coated onto a wet-strength kraft paper having the necessary physical strength requirements for coating and which, when it is intimately bonded with the resin, produces a finished sheet meeting the requirements of the government specification involved. This coated sheet is a deep glossy black and is capable of being heat sealed. The base stock, because of the upgrading effect of the resin on its physical properties are 35-lb. wet-strength kraft for Type 2 and 55-lb. kraft for Type 1. About $1\frac{1}{2}$ -2 mils of resin are coated onto the paper. Water-vapor-transmission rates, when determined by the method outlined in paragraph F4a of JAN-P-117 varied from 0.8 g./100 sq. in./24 hrs. -

WATER-RESISTANCE tests. The dye has been exposed to water vapor in two of the samples (left) to show the change when moisture seeps through barrier.

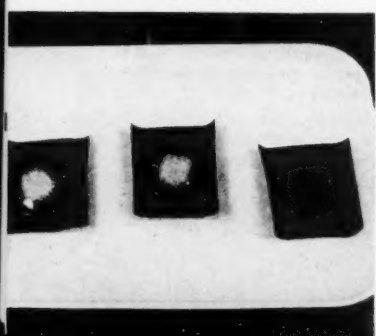


PHOTO COURTESY OF THE CHEMICAL CO.

0.04 g./100 sq. in. at 100 deg. F. and 95 R.H., depending on the thickness of the coating.

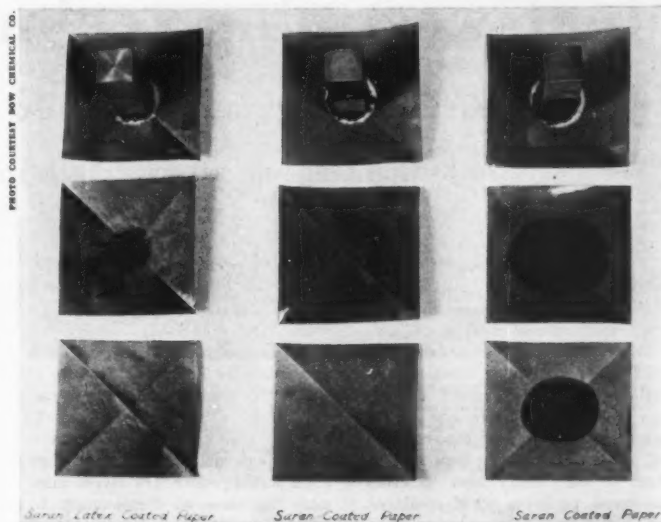
This type of packaging, where protection against corrosion is of greatest importance, has enabled saran-coated paper to grow to a considerable volume in less than six months. In this field it has been the first plastic-coated paper to compete successfully with paper-backed, vinyl-coated foil. While its weaknesses compared with the vinyl-coated foil are a higher rate of water-vapor transmission and an inability to remain as flexible as foil at sub-zero temperatures, it is, however, much less susceptible to cracking and pinholing when rough handled at normal temperatures of packaging.

The saran-coated paper conforming to Type II, Grade A, Class d under JAN-P-117 can be readily creped. Such a creped sheet may be used as a cable wrap where good moisture and solvent resistance are required, as a liner in multiwall bags where resistance to corrosive chemicals is important and as an intimate wrap where resistance to synthetic oils and greases is necessary.

In the food field the problems of color, toxicity, taste and odor are of extreme importance and all tests of necessity are of long duration. Functionally, saran-coated paper has performed well. Its resistance to water vapor, permeation by essential oils and its solvent and chemical resistance have proved very satisfactory to the companies which have investigated its qualities. Special saran coating resins have been compounded containing materials satisfactory from the standpoint of toxicity and odor. These special resins are similar to the resins used in the manufacture of Saran 517 film which has already had wide acceptance as a food-packaging material. These resins when cast onto paper are clear, glossy, non-toxic and free of odor and plasticizer exudation. It is expected that the food tests now in progress will duplicate with the coated paper the results obtained with the Saran 517 film.

In the field of hot-melt paper coating there are, in addition to saran, several other resins of interest. These include polyethylene, polyvinyl chloride-acetate and other vinyl copolymers.

Polyethylene because of its inherent flexibility and its natural coating qualities is generally applied in the



TAPPI GREASEPROOF TESTS. First row across top shows sand, dye and pound weights on top of coated papers. Center row across shows staining produced on coating. Last row across shows back sides of the papers. The vertical series on the left (saran latex coated paper) shows that staining was on the coating but did not go through the paper. Second and third vertical series are both saran-coated paper, but the third series (far right) had been cut with a razor blade to fail intentionally and the dye went through the paper, whereas the second vertical series (in the center) shows no staining of either the coating or of the paper.

unmodified state. Saran and the vinyls are generally compounded to assist in fabrication and modify physical properties for specific end uses. Saran, polyethylene and polyvinyl chloride resemble each other chemically except in the amount of chlorine in the basic monomer unit. Polyethylene has no chlorine in the monomer unit, while polyvinyl chloride has one chlorine atom per monomer unit and saran has two. These two chlorines account for a great many of the unusual properties of saran.

Table I illustrates the differences in the properties of the resins.

Conclusion

Hot-melt, saran-coated paper is a fledgling among the other thermoplastic coatings such as polyethylene and particularly vinyl. It is superior to polyethylene-coated paper in its impedance to water vapor and to gases. It is superior to polyethylene-coated paper in grease and solvent resistance. It is comparable to polyethylene in its resistance to acids and in heat sealability. It is slightly inferior to polyethylene in alkali resist-

ance and quite inferior in low-temperature flexibility. In relation to the oriented saran free film, saran-coated paper, while not transparent, is easier to fabricate, does not shrink with temperature and does not stick to the sealing bars. Saran-coated paper is produced in two grades: a non-toxic, odorless and tasteless coating for food and a carbon-black pigmented grade for non-food or industrial uses.

The industrial coated paper is used in the packaging of small machine parts, photo film camera parts and small bearings. In the food field it is being considered as a cap liner, a packaging material for frozen foods, dehydrated foods, dairy products and cosmetics.

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Meat-wrapping technique

EXPERIMENTS SHOW THAT LOOSE FILLING AND LOOSE WRAPPING

OF GROUND BEEF WILL PRESERVE COLOR LONGER.

By Thomas H. Derby*

Self-service meat managers are in general agreement that ground beef has a shorter shelf life than any other pre-packaged meat item.

Since the average housewife's chief guide in judging meat and its freshness is colorful, moist appearance, many markets are now forced to follow the costly and time-consuming practice of grinding their beef as often as once every hour to avoid discolored packages which will not sell. Some dealers even try to capitalize on the operation by advertising their hamburger as "ground every hour."

This freshly ground feature soon loses its novelty appeal for shoppers, however, leaving meat departments with the burden of high preparation costs for an item which should provide a higher proportion of profit.

Today it is known that the type of cellophane recommended for moist red meats owes much of its effectiveness to its high oxygen-permeability characteristics. Fresh beef needs oxygen in its surrounding atmosphere to maintain desirable "bloom" or bright red color.

Mechanism of discoloration

Lavers'† review of past work on this subject and his own investigations indicate that hemoglobin, the primary color pigment of meat, exists in three basic forms, each having a distinctive color. Myoglobin, or reduced hemoglobin, is the dark purple observed on freshly cut beef. Oxyhemoglobin, or oxygenated hemoglobin, is the desirable bright red appearance seen when the cut meat surface has been exposed to air for 15 or 20 minutes. Here, oxygen is in loose chemical combination with the hemoglobin and no true oxidation has yet taken place. Methemoglobin, which is the oxidized form, presents a brown, undesirable

color. It represents the conversion of the ferrous (Fe^{++}) fraction of hemoglobin to the ferric (Fe^{+++}) state. While methemoglobin contains no more oxygen than myoglobin, oxygen markedly influences the rate at which the reaction occurs. Low partial pressures of oxygen, about 20 mm., are most conducive to formation of methemoglobin from myoglobin. High partial pressures of oxygen minimize the rate of discoloration by maintaining a large percentage of meat pigment in the oxyhemoglobin state.

For maximum preservation of the desirable bright red color, it is therefore necessary to maintain reasonably high oxygen concentration in contact with the meat surface.

The loosely combined oxygen in oxyhemoglobin is rapidly depleted by bacteriological and chemical actions. When a continuing supply is cut off from the meat, discoloration rapidly occurs.

An effective demonstration of this action may be made by placing a small thin glass cover slip (the type used in microscopy) on the surface of a freshly bloomed beef round steak. Within three hours the area beneath the glass becomes completely discolored with the brownish cast of methemoglobin, while the uncovered area remains bright red. It is thus evident that the initial supply of oxygen required to cause oxyhemoglobin formation is not sufficient to maintain it. A continuing supply of oxygen must be available to prolong the bloom of any packaged red meat.

It was found in early packaging experiments with red meats that the standard moistureproof cellophane, which is coated on both sides with a moisture-resistant lacquer and is highly impermeable to the transmission of fixed gases, acted in much the same manner as the cover glass, causing rapid discoloration. On the other hand, plain regenerated cellulose—the basic non-moistureproof un-

coated cellophane—is known to possess a considerably increased degree of permeability, when wet. This film was found to transmit sufficient oxygen to maintain the bright red color characteristic of oxyhemoglobin for substantial periods of time. Its assets for this purpose are, however, offset by the film's high water-vapor transmission, which allows desiccation of the meat surface. Furthermore, the plain film is not heat sealing, which makes it impractical for meat packaging.

Special meat film

These established shortcomings of both standard moistureproof and non-moistureproof cellophane for fresh red meats led to the development of a cellophane coated on only one side with a moistureproof, heat-sealing lacquer. This film, when applied with the uncoated side toward the meat, permits moistening of the base film with resultant improved oxygen permeability, while still providing a satisfactory degree of moisture protection and heat sealability. The lacquer coating is sufficiently thin and permeable to allow transmission of an adequate oxygen supply through the composite material.

Most beef items wrapped in this film are kept salable for two, three or more days, depending on the type of beef muscle, storage temperature, grade of meat and other factors.

Ground beef wrapped in the same film, however, usually cannot be held for more than one day and more often, as has been stated, its bloom lasts much less than a day.

It is therefore apparent that the oxygen demands of ground beef are greater than may normally be transmitted by the packaging film as it is now commonly applied. Although the scientific causes for this increased demand have not been fully established, it is probable that the critical nature of the product is due to the greater surface area exposed and the greater

* Market Development Department, Sylvania Division, American Viscose Corp., Philadelphia.
† Lavers, C. G. "Discoloration of Packaged Red Meat," MODERN PACKAGING, 21, No. 5, 125-127 (Jan. 1948).

distribution of oxygen-consuming bacteria present on the fresh beef trimmings.

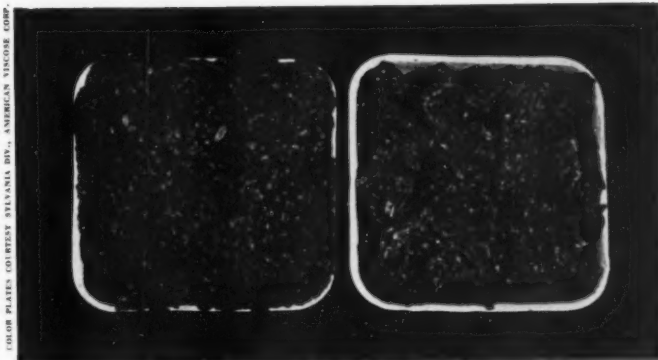
Guided by this knowledge and by field observations indicating that ground beef discolored first in areas where the meat surface was pressed tightly against the film, experiments were set up in which the primary consideration was that of maintaining a sufficient partial pressure of oxygen within the package.

This was accomplished by filling and wrapping the meat so that small amounts of air were entrapped in the package and allowed to reach all exposed surfaces of the ground beef by avoiding direct contact between the film and large areas of the meat. Oxygen passing through the moist film, which normally is the only supply available to the meat, was thus supplemented by air entrapped during packaging.

It was realized that excessive air voids between the film and the meat would be undesirable. Such voids would allow a great deal of air circulation within the package atmosphere, which could lead to dehydration of the meat surface, loss of visibility from condensation and the danger of contaminating water droplets falling back on the meat.

Experimental procedure

For the experiment, a batch of commercially prepared ground beef from fresh beef trimmings was divided into nine equal portions. Three portions were tightly packed into trays and each wrapped very tightly with a different one of the three test films used. Three more of the portions were packed very tightly, but wrapped



BETTER COLOR of loosely filled, loosely wrapped ground beef on right is apparent. Beef in both packages is from same batch and both were stored under identical conditions for 48 hrs., both using MSBO cellophane. Loose wrapping entraps more oxygen, which seems to preserve color.

loosely in the test films. The final three portions were loaded very loosely into trays and wrapped very loosely.

To avoid excessive air voids, the looseness of the wrap was limited by the height of the mound of ground beef, with the film resting *lightly* on the meat surface, but not deforming the shape of the mound.

The three cellophane types used were Sylvania's 300 MSBO (fresh red meat film coated on one side only, 0.001-in. thickness), 450-gauge MSBO (fresh red meat film coated on one side only, 0.0014-in. thickness), 300 P-1 (non-moistureproof, non-heat-sealing). The P-1 was included to confirm the necessity for preventing dehydration during display. The trays used were those in common use by the self-service meat industry.

The procedure was duplicated with ground round steak selected from the same section of one beef round.

The packages were stored in a refrigerated cabinet where the temperature was maintained between 32 and 40 deg. F. and the relative humidity between 60 and 70%. Observations were made at the end of 24 and 48 hrs.

The results are shown in Table I. Parallel results were obtained with ground round steak.

Descriptions in the table are graphically illustrated in the accompanying natural-color photograph. It will be observed that a marked difference in color and "fresh" appearance exists between the tightly filled and wrapped product and the loosely packed and loosely wrapped ground beef. The packages which were tightly filled but loosely wrapped showed intermediate discoloration.

It is evident that the entrapped air, supplementing that permeating the film, was most helpful in keeping a large amount of the meat pigment in the form of oxyhemoglobin. Loose filling entraps more air than tight filling and has the added advantage of not forcing oxygen-demanding blood to the product surface.

Data in Table I further indicate that film thickness does not affect discoloration. The test also provides conclusive proof that non-moisture-proof cellophane such as Sylvania's P-1 allows harmful dehydration with its typical dried dark appearance.

(This article continued on page 174)

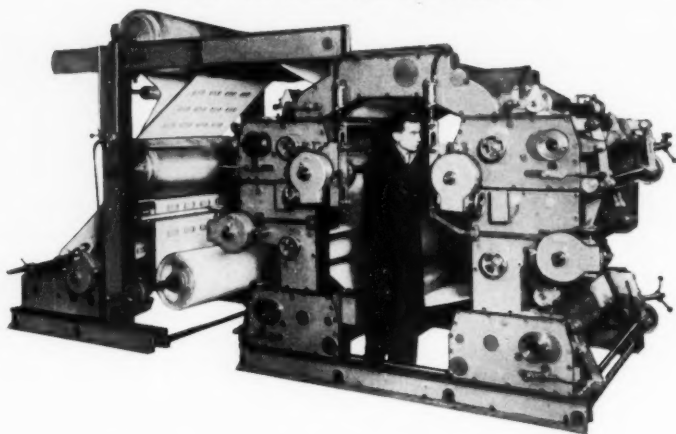
TABLE I—EFFECT OF PACKAGING METHOD ON COLOR RETENTION OF GROUND BEEF*

Wrapping film	Tightly filled meat, tightly wrapped and stored for		Tightly filled meat, loosely wrapped and stored for		Loosely filled meat, loosely wrapped and stored for	
	24 hrs.	48 hrs.	24 hrs.	48 hrs.	24 hrs.	48 hrs.
300 MSBO (fresh meat film)	Dull brown	Dark brown	Brownish cast	Dull brown	No change	Slight brownish cast
450 MSBO (fresh meat film)	Dull brown	Dark brown	Brownish cast	Dull brown	No change	Slight brownish cast
300 P-1	Dark brownish red; dried	Dark reddish brown; dried	Dark red-brown; dried	Dark brown; dried	Slightly deep red; dried	Dark reddish brown; dried

* Storage conditions: 32-40 deg. F., 60-70%R.H.

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The BT-30 makes the many advantages of *Continuous Flow* packaging available to small manufacturers, where short runs of several sizes may add up to steady use of the machine. Sealing both ends of the carton separately, the Model BT-30 makes valuable savings in floor space,

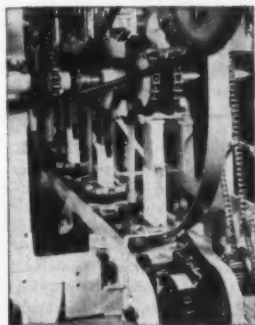
time, and machinery costs. Compact and efficient, it easily handles packages varying in height up to 10", with an interchange of precision made parts, designed specifically for each carton. The complete change-over from one size package to another requires only 40-60 minutes time.

As shown in the above illustration, knocked-down cartons are manually fed to individual mandrels where the bottom of the carton is sealed under controlled pressures as high as 1 ton to the square inch (bottom right). The carton is then automatically blown off each mandrel through a chute and carried by conveyor to the filling operation. After filling, it is returned to the BT-30 where the top is tightly sealed by the *Continuous Flow* pressure method. In both top and bottom sealing, the amount of pressure and the amount of drying time can be adjusted to fit varying conditions encountered at different speeds and with different types of stock.



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Questions & Answers

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Plastic packages for chemicals

QUESTION: We manufacture a group of special chemical solutions which have applications in many different fields. We would like to know if it is practical to consider putting some of the solutions in plastic containers to reduce the danger of breakage in use and during shipping.

ANSWER: There are plastic containers on the market which have been used successfully for the packaging of various organic and inorganic chemicals alone or in solutions. A polyethylene bottle is probably the best all-around answer to your problem. Polyethylene is extremely inert to attack or change by most chemicals and is unbreakable. However, polyethylene containers are not transparent. Even though polyethylene will probably not be affected by your chemicals, there is the possibility that some of your products might carry volatile portions which could permeate the resin over extended periods of time. There is no general rule which can be applied to judge whether or not any specific chemical or chemical solution can be packaged in polyethylene for a particular product and use. However, it is suggested that you obtain polyethylene bottles or other containers and evaluate them for

their effectiveness with each of the chemical solutions you are considering packing in plastic. A storage test of such samples run over an extended period of time and an occasional examination of the product will determine their suitability.

Moistureproof vinyl film

QUESTION: Can you tell us if vinyl film is made in moistureproof grades?

ANSWER: Films made from vinyl resins do not normally have sufficient moistureproofness to give product protection. Vinyl films are characterized by clarity, high strength and greaseproofness. A great deal of work has been done to find a means of modifying such films so that they will have an effective resistance to the passage of water vapor. There is no doubt that a moistureproof vinyl film would have interesting potentialities, but at the moment no one is offering such a film commercially.

Heat-sealed resin-coated board

QUESTION: We have been doing some experimental work involving coating of paperboard with different heat-sealing lacquer formulations. The board we are using is quite tough and flexible, but we have noticed that after coating it tends to crack on the folds and otherwise show embrittlement. This occurs even though the coatings we are applying are extremely flexible.

ANSWER: There are many factors which can contribute to the development of brittleness in a paperboard which has been coated with heat-sealing resins. It may be that the board you are using does not have the proper surface characteristics to prevent the coating from excessively penetrating into the board. Boards used for lacquering should have a very smooth and dense surface and preferably be given a sizing treatment which will tend to keep the

coating on the surface. It is also possible that the formulation you are using contains plasticizer which migrates into the board and tends to make the coating become brittle in storage. If the coating method you are using involves heating in an oven to eliminate the solvents, it may be that the board should be rehumidified before it is fabricated. With the proper combination of board surface, coating formulation and coating application, it should be possible for you to produce a board that stays flexible.

Breakage of cellophane bags

QUESTION: One of our products is a very crisp and hard cereal product. It is packed in a printed cellophane bag and very often we have complaints due to breaking and splitting of the cellophane. Our product is packed directly from the processing machines and we wonder whether this could have any effect on the breakage of the cellophane.

ANSWER: The strength and flexibility of cellophane are dependent upon its moisture content, the type of cellophane and the humidity to which it is exposed. Your product will tend to dry out the cellophane, particularly in winter months when the humidity of the air is low. If your product is at an elevated temperature when it goes into the cellophane bag, this will increase the brittleness of the cellophane and you can expect some benefits by cooling the product before packing. There are also very many different grades of cellophane, some of which have been specially developed to maintain flexibility at low humidities. It is suggested that you try several different grades of cellophane and take steps to cool your product before placing it in the bags. The results of these trials should indicate whether or not you could expect any benefits from these changes. If not, you should use a double cellophane bag or a bag made from plastic film.

The authors of the article "Free Oil in Packaged Foods" have called our attention to the fact that the subtitle placed on this article in our August issue, indicating "a method of measuring resistance of container materials to stain from the product," may give an erroneous impression. More accurately, the Landrock-Proctor method is "a method of measuring the ability of a food product to stain a package" and subsequent reprints of the article will show the sub-title that way.

THE EDITORS



How pouch paper coated with Du Pont ALATHON* helped a detergent maker open a new market

Unusual properties of "Alathon" make it possible to use pouch-type packages for a wide variety of products

Women staying at hotels often wash their stockings and underthings in the basin. One detergent maker saw this as a new market—supplying hotels with single-use pouch packages of detergents for their guests.

The package needed an inner moistureproof coating to prevent caking. The answer proved to be Du Pont "Alathon" polythene resin. Only $\frac{1}{2}$ mil thick, this coating provides the necessary moisture barrier to keep the detergent in a free-flowing condition. Like many other packagers, the detergent maker found that paper coated with "Alathon" is easy to

work with. His present machines make and fill the packages at high speed. The coating gives a good heat seal, even when some of the contents "dust" into the sealing area.


Du Pont "Alathon" polythene resin has other advantages for packaging. The resin is highly resistant to alkalis and acids. Blended with wax, "Alathon" produces a tough, glossy coating for bread and other food wraps. It also can be made into many types of closures (screw-on, snap-on, plug-type, etc.). Or it can be molded into flexible bottles for a wide variety of products.

Demand for "Alathon" currently exceeds supply. However, we suggest you investigate its properties, and prepare now for future applications. We'll gladly discuss the availability

of quantities for development work. For further information, write:

E. I. du Pont de Nemours & Co. (Inc.)
Polychemicals Dept.—District Offices:
818 Olive Street, St. Louis 1, Missouri
350 Fifth Avenue, New York 1, New York
7 S. Dearborn Street, Chicago 3, Illinois
845 E. 60th Street, Los Angeles 1, California

*REG. U. S. PAT. OFF.



REG. U. S. PAT. OFF.

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Polychemicals
DEPARTMENT

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ACIDS

For Packaging Acids

so that they can be shipped, stored and handled without fear of breakage, on the ground or in the air. Need to get a highly corrosive or expensive chemical somewhere in a hurry? The Plaxpak bottle is the answer. Take it high in the sky. Unequal pressures will cause it to flex, but not break or pop its closure. Drop it on the ground. It will bounce, but not break. Shipping weights are drastically reduced. When compared empty, the Plaxpak bottle is one-fifth the weight of glass; when filled, one-half the weight.

Only the best is

OTHER EMHART PRODUCTS INCLUDE:



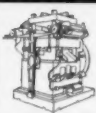
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For Packaging Pharmaceuticals in liquid or powder form, the Plaxpak bottle offers the triple advantages of unbreakability, lightweight and, where desired, controlled dispensing as a spray, stream or droplet. Shown above are some stock bottles for medicinal use.



For Laboratory Research the Plaxpak bottle provides the convenience of an unbreakable, chemically inert container, and the added advantage of controlled dispensing. The stream dispensing fitment shown above was developed by S. H. Ansell & Sons, Boston, Mass.

For Boosting Turpentine Production

the Plaxpak bottle has proven an invaluable aid. It is used as a container for sulfuric acid, which is squirted into "wounds" in the tree to increase sap flow. Safe, easy to handle and inert to the acid, the Plaxpak bottle speeds up operations, vastly increases manhour output and helps to lengthen tree productivity.

good enough

HELPFUL PLAX LITERATURE

Catalogs on Plaxpak bottles and other Plax products are available on request. Also available is a booklet "Fabrication of Polystyrene."



Plax blow-molded products are made under the following U. S. Pats.: 2128239, 2175053, 2175054, 2230190, 2260750, 2283751, 2349176, 2349177, 2349178, 2330188. *Reg. U. S. Pat. Off.



PLAX CORPORATION

Subsidiary of Emhart Mfg. Co.
P. O. BOX 1019, HARTFORD 1, CONN.
In Canada, Plax Canada, Ltd., Toronto
Sales Offices: New York City, Syracuse,
Philadelphia, Cincinnati and Chicago.

Equipment and materials

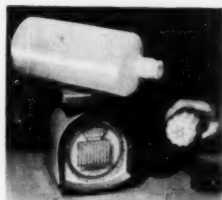
NEW FLUORESCENT-PRINTED SPECIALTY PAPERS

adapted to gift wrapping, packaging, labels, displays, as well as box coverings and linings have been announced by Starbuck Mfg. Co., Inc., Leeds, Mass. Marketed under the Day-Glo trademark, these specialty papers are printed with the new Day-Glo gravure inks just announced by Fred'k H. Levey Co., Inc., New York, upon completion of long-term tests. Day-Glo pigment colors are manufactured by Lawter Chemicals, Inc., of Chicago under license from Switzer Bros., Inc., Cleveland. A limited range of patterns and colors is now in production by Starbuck, but it is stated that the new fluorescent-decorated papers will be available in a wide variety of designs. The Levey company reports that both sheet-fed and web-fed gravure presses lend themselves to production of Day-Glo gravure printing, but emphasizes that Day-Glo letterpress and offset inks are not yet available.

LARGE BLOW-MOLDED POLYETHYLENE BOTTLES

in sizes of 1 gal. and larger were announced by two producers last month. One company is offering a 2-gal. size. The larger sizes are expected to simplify the handling, packaging and shipping of corrosive or valuable chemicals and other critical liquids; it is also obvious that they will conserve the supply of polyethylene resin for these essential uses.

The Elmer E. Mills Corp., Chicago, now has in limited production a 1-gal. cylindrical bottle with a molded polyethylene closure, closely approximating the standard pharmaceutical



glass gallon bottle in shape, shown at left. With cap removed, it measures 13 $\frac{1}{16}$ in. high and 5 $\frac{1}{2}$ in. in diameter, tipping the scales at just under 1 lb. The engineered design of the new 1-gal. bottle, according to Mills, results in added strength due to the high section modulus obtained. The bottle finish, designed for use with the special-type polyethylene closure,

has its own pouring lip and carries a modified AST 29-deg. stub thread, with three full turns for positive sealing. The molded cap requires no liner and affords three distinct means of screwing or unscrewing. The 12-sided contour of the closure body fits a standard box wrench, while the upper section of the cap consists of a hexagonal head on which a box wrench or monkey wrench may be used. Grooves molded across the top of the closure also permit optional use of a rod, screw driver shaft or other non-standard wrenching tool. Weight of the molded polyethylene closure is approximately 3 oz.

The Plax Corp., Hartford, Conn., has announced the availability of both 1- and 2-gal. sizes of Plaxpak polyethylene bottles, illustrated below. The 2-gal. size, believed to be the largest



one-piece plastic bottle ever molded, weighs 2.32 lbs. in comparison with 6.07 lbs. for its glass equivalent. Weight of the 1-gal. bottle is 1.27 lbs. compared with 3.31 lbs. for the glass equivalent. Plax, in cooperation with a Government agency, recently conducted shipping tests on the electrolyte solution requirements for three different types of batteries. Use of the polyethylene container resulted in weight savings of 19.1 lbs. to 48.2 lbs. per battery and in space savings

of 930 to 1,900 cu. in. per battery, these tests revealed. Both new bottles, designed in the standard Boston Round shape, are threaded to accommodate standard acid pour-out caps, but thread finishes for other types of standard closures can be supplied.

With the overseas shipment of bulk chemicals becoming increasingly important, Plax believes the primary use of the large-sized bottles will be for products packaged for military or essential civilian needs.

HIGH-SPEED ELECTRONIC COUNTERS

that are claimed to count accurately over 10,000 units per second are offered by the Post Machinery Co., 140 Elliott St., Beverly, Mass., makers of paper-box machinery.

The Post Hi-Speed counter illustrated, equipped with six digit reset totalizer and double scale rate meter, is designed primarily for use by fold-



ing-box manufacturers and is supplied as standard equipment on all Post gluers, yet the counter is equally adaptable for users of folding boxes in their production operations. It is only necessary for the carton to interrupt a beam of light to actuate the counting circuit.

After the passage of 25 or 50 (depending upon the position of the selector switch), a solenoid is energized which displaces a carton from its normal line of travel. If unit counts other than 25 or 50 are required, the counter can be so wired. The unit is capable of counting cartons smaller than a penny-sized gum box as well as double side-wall cartons.

Another unit, the Post Promatic electronic counter, made by the same firm operates at lower speeds and is less expensive. Exclusive sales agent for this machine is the General Control Co. Industrial applications of this versatile counter are said to be unlimited, since it may be employed to tabulate miniature parts as well as large, bulky units and can be adapted to volumes of solids or liquids.

A NEW FLAT-TOP CONVEYOR

which flexes in two planes—horizontally and vertically—and can curve around corners within a radius of 6 in. is being marketed by the Chain Belt Co., 1600 W. Bruce St., Milwaukee, under the name Rex FlexTop. Designed primarily for tip-free conveying of bottles, jars, packages or small parts, the biggest advantage claimed for the FlexTop is its elimination of transfer points in the conveyor system, thus minimizing the danger of containers being chipped, tripped or otherwise damaged as they transfer from one chain or conveyor to another.

AN IMPROVED TWO-UNIT BAG MAKER

designed to produce multiwall paper cement bags of two to six walls, in a variety of sizes, either of the valve or open-mouth types, is being manufactured by the German firm of Windmoeller & Hoelscher, for which the H. H. Heinrich Co., 200 Varick St., New York, is the exclusive agent for the Western hemisphere. One unit comprises the tuber and the second unit is the bottomer. Marked economy of operations and either stepped-up or controlled rates of production are claimed for the new type of bag-making machine. Better moisture resistance due to an exclusive feature for automatically pasting the bottoms



Hats, courtesy John-Fraderics, Inc.

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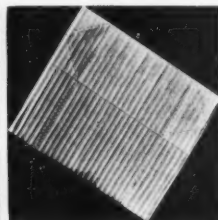
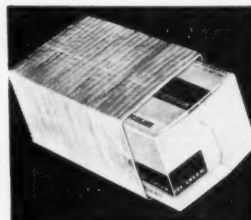
Equipment and materials

of the bags is said to be one of the advantages of the unit. The tuber may come equipped with an aniline printer with from one to four colors.

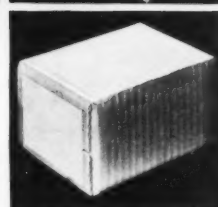
TWO DEVELOPMENTS IN INSULATED PACKAGING

for ice cream (see "Igloo for Ice Cream," MODERN PACKAGING, Aug., 1951, p. 72) have just been announced.

The Sherman Paper Products Corp., Newton Upper Falls, Mass., is offering a new low-cost corrugated ice-cream sleeve that is said to meet the demands for an insulating "take-



Ice-cream carton being put in the new Sherman ice-cream sleeve (above). Corrugated insulating sleeve ships flat (upper right). Insulating wrap formed on Package Machinery Co.'s special Model FF unit from roll stock has automatically applied end seals (lower right).



home" package, yet does not entail the purchase of expensive, special machinery. It is claimed to cost less than a third of the conventional insulating package. The sleeve is made of heavy corrugated kraft paper backed with a stiff sheet of bleached white kraft and is held firmly together with a strong glue lap. It is deep scored and perforated for easy assembly. The sleeve completely surrounds the ice-cream package when it is slipped over and sealed. Trapped "dead" air within provides an effective insulating blanket and the corrugations act as cushions for the package. Several automatic and semi-automatic machines have been developed by packaging companies to fit into pint ice-cream-wrapping production lines with no interruption to flow.

The Package Machinery Co., Springfield, Mass., has developed a new machine, a special Model FF, that encloses pint ice-cream cartons in insulating wraps of corrugated material fed from large rolls. The machine cuts the material from the roll, slits it for end folds, then scores and forms it neatly around the entire carton. Automatically applied end seals hold the folded ends of the corrugated wrap firmly in place. Speed of the unit is reported to be 60 to 80 cartons per minute. One of the machines now in operation at H. P. Hood & Co.'s Boston plant feeds the corrugated-enclosed cartons for final wrapping in a printed waxed-paper wrapper. At Plantation Foods, Uleta, Fla., the machine wraps six individual-serving cartons in two rows of three each.

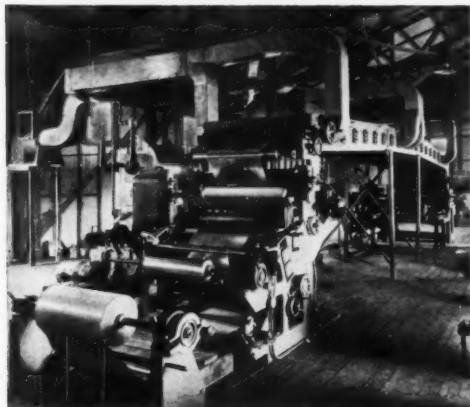
A SPECIAL TREATMENT FOR PLASTIC BOTTLES

that is said to reduce the tendency of dust to form on them has been announced by Plax Corp., Hartford, Conn. The process can be provided for unbreakable Plaxpak polyethylene bottles at the time of bottle production. The company reports that comparative tests conducted from April 11, 1951, until recently on a number of light-colored cosmetic bottles showed that

treated bottles collected less dust and that the dust did not settle in static patterns. Conditions approximating those bottles would meet while on retail display were simulated.

GLUE MOUNTER, COLORING AND HEAT-SEAL

laminating machines built primarily for the foil converter are being offered by the Inta-Roto Machine Co., Inc., Richmond, Va. The outstanding feature claimed for this GM-1000 ma-



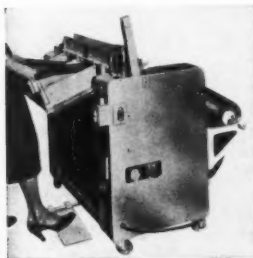
chine is its adaptability to a greater variety of materials which enables the small foil converter to diversify his output and the large foil converter to run in one operation many materials which otherwise require several machines or several passes through the machine. The machine is built extremely heavy for high production speeds. The foil feed-in mechanism is designed to correct imperfect rolls by means of tensioning and breaking so that foil may be run in gauges of 0.00035 to very heavy gauges. The line of machines manufactured by Inta-Roto now includes glue laminating, heat-seal laminating, wax laminating, proof presses for inks, lacquers and laminants.

METALLIC ACETATE

is being offered as a substitute for critical metals by Coating Products, Inc., 136 W. 21st St., New York, for use in the display and metal-sign fields. Since the plastic material can be laminated to heavy board, a quality of rigidity is obtained in this application. Signs can be silk screened or reproduced with other processes. The metallic acetate is comparatively lower in cost than metals.

A SLITTER AND CUTTER FOR BARRIER MATERIALS

used in military packaging is the new Corley-Miller Model BL machine manufactured by the Miller Wrapping & Sealing Machine Co., 18 S. Clinton St., Chicago 6, Ill. Particularly adaptable for Grade C, Type I materials fed from rolls, the machine when furnished with the maximum number of rotary slitters



will cut up to six pieces per cycle, giving the high speed of 216 sheets per minute. Features of the unit include special provision to prevent tacky materials from sticking to the cut-off knife, trip levers which can be locked in "on" position for continuous action or manually tripped for each cut, provision for delivery of cut sheets to an accumulator tray or onto an intermittent-

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Equipment and materials

motion table-height conveyor that can be incorporated as part of the machine, variable speed drive adjustable from 12 to 36 cuts per minute and simple crank adjustment for cutting sheet lengths from 3 to 26.

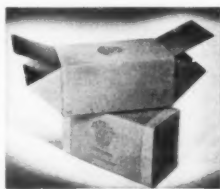
DOUBLE-WALL POLYETHYLENE JARS

are announced by the Injection Molding Co., 3823 Independence Ave., Kansas City, Mo. The new patented IMCO jar provides insulation and is said to overcome permeation of the contents by heat or cold and also prevent bleeding of essential oils sometimes found in single-wall polyethylene jars. Jars are available in any color, with all printing and labeling heat etched on the jar by a special process. An exclusive license for manufacture in France of these and other patented polyethylene bottles has been granted by Injection Molding Co. to La-Roche Freres, Paris.



A NEW SMALL-PARTS SHIPPER

called the "Bin-Pak" is a special shipping, storing and dispensing container that reduces handling of small wooden, plastic or metal parts. Manufactured by Bird & Son, East Walpole, Mass., it is constructed of corrugated board with a sleeve running through the entire length, with scoop ends that pull out a limited distance on both ends and covering flaps which, when taped, seal the ends of the box. The Bin-Pak's most obvious advantage is to the small-parts customer, drastically cutting down the materials handling from receiving room to work station. These packaged units remain in the Bin-Pak from the time they are received until actually used, without the need for transferring the contents.



A NEWLY DESIGNED TAPE CHOPPER

currently being manufactured by the R. E. Ashmun Co., Redwood City, Calif., is a tool that is said to have wide use in the domestic and export packaging field for all types of pressure-sensitive tape, whether paper masking or waterproof cloth type.



The chopper, appropriately called the "Tape Chopper," has a permanent cutting safety blade that is V shaped for least-resistance cuts. It can be loaded and unloaded with ease, is light in weight so that the user may move the package rather than bring the package to the dispenser. The tool eliminates the need for pre-cuts or pre-measurements; one merely applies the desired length and then chops the tape off at that point.

A NEW LINE OF BAGS, ENVELOPES AND LINERS

for drums, boxes and other containers is now being offered to the packaging trade by Blossom Mfg. Co., 915 Broadway, New York 10. The liners, envelopes, etc., are fabricated from a transparent plastic film said to be a combination of polyethylene and vinyl and come in gauges from 0.002 to 0.008. The film is said to be moistureproof and resistant to most acids.

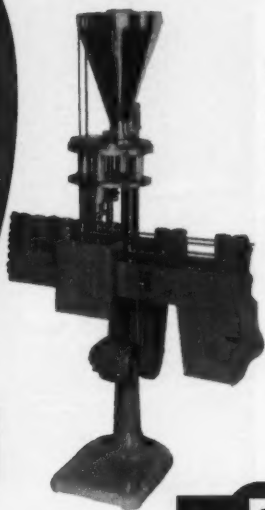
MODERN PACKAGING

**FAST
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MOST DRY PRODUCTS
IN FLAT BOTTOM
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Seeds • Spices • Noodles • Beans
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has cast aluminum frame, shaped to fit hand; convenient trigger raises and lowers anvil; capacity is thickness up to $\frac{1}{8}$ " ; horizontal glass covered $3\frac{1}{2}$ " diam. dial graduated $1/1000$ ths of an inch. For use throughout the plant or when traveling. Extremely accurate; direct reading; no computing. Spherical end anvils available on order.

For calipering thicknesses of Papers, Boards, Foils, Felt, Glass, Metals, Plastics, Rubber; Sheet stock or Finished Products with thicknesses to one-half inch.

CADY

Standard Model

Registers thicknesses to $5/16$ " ; available with 4, 7, 12 or 18" throats. Glass covered dial is 6" diameter; graduations $1/1000$ ths inch.

CADY

Dead Weight Model

Dead Weight Anvil depends by gravity for extremely uniform pressure and completely accurate calipering. 6" diameter glass covered dial; $1/1000$ ths graduations.



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**"Eye appeal
is
buy appeal"**

says Leo I. Brown,
Supervisor of Stores,
New England Food Fair,
Brookline,
Massachusetts

"Wherever we have added visible wraps to products, we have enjoyed substantial sales increases. There is no question but what eye-appeal is buy-appeal. Now we are anticipating increased sales in our canned goods department when more glass pack is available."



Sight boosts sales in every department. This display of glass-packed fruits proves mighty hard for customers to resist.

The time-proved glass package for prepared foods is the only visual package for processed* foods!

Glass has been a selling package for ketchup, pickles, peanut butter and many other products for years. The people who sell your products are sold on the advantages of glass. They know from experience that the sparkle and appetite appeal of glass-packed products automatically increase impulse sales.

And glass increases total food

sales without using extra shelf space. This was proved by careful market tests in the American Stores of Philadelphia. There, the new technique of displaying glass and tin side by side, in the same space previously used for tin alone, paid off, in every instance, by increased sales. TOTAL SALES of all items tested increased 35.6%.

*Heat-sterilized in container



Visibility has long been at work for dozens of products in glass. People are reminded when they SEE. And when reminded, they BUY.

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CONTAINERS

SELL FOOD

BY SIGHT

OWENS-ILLINOIS GLASS COMPANY
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BRANCHES IN PRINCIPAL CITIES

Plants and people

The board of directors of the **National Flexible Packaging Assn.** announces the appointment of **John M. Cowan** as managing director. For the past 20 years Mr. Cowan has been closely associated with the flexible packaging industry. He served as advertising manager of Du Pont's Cellophane Division and for the past 12 years has been with the Dobeckmum Co., Cleveland, as assistant director of sales distribution.



J. M. Cowan

The National Flexible Packaging Assn., organized last year, will hold its first annual meeting on Sept. 12 at the Hotel Astor, New York. The association now has 50 members comprising the leading converters of flexible packaging and its headquarters are now located in Cleveland.

John J. Hain, treasurer of **The Gardner Board & Carton Co.**, Middletown, Ohio, has retired from active executive management of the firm because of ill health. He is succeeded by **Calvin F. Lloyd**, assistant secretary and treasurer. Mr. Hain will continue to serve the company as a management consultant.

Also announced by the Gardner company are the following appointments: **Deane A. Hodapp**, senior industrial engineer; **William H. Christian**, carton salesman; **Harold J. Voorhis**, credit manager.

Hobart B. Putney has been named assistant manager of sales for cellulose sponges and Cel-O-Seal cellulose bands in the Film Dept., **E. I. duPont de Nemours & Co., Inc.**, succeeding **Charles E. Fogg**, who has been promoted to assistant manager of the Yerkes cellophane plant in Buffalo, N. Y.

Confecciones de Papel Shellmar de Colombia, S. A., a subsidiary of **Shellmar Products Corp.**, Mt. Vernon, Ohio, recently began operations in its newly built plant at Medellin, Colombia. **L. K. Hanson**, general manager of foreign

operations for Shellmar, attended the dedication of the Medellin plant, with **Ben Verson**, treasurer, representing the corporate management. Dedication ceremonies were also attended by Colombian representatives of other North American companies and local government dignitaries. The new plant, constructed to take care of the increased demand from South American countries, has an area of 30,000 sq. ft. and adjoins the airport.

Celanese Corp. of America will shortly begin construction of a new and modern main laboratory building at the Clarkwood, Tex., petroleum chemical research and development center at a cost of approximately \$500,000. The building will supplement present facilities and is expected to be in operation within a year.

The Ottawa River Paper Co. of Toledo, Ohio, and Flint, Mich., has opened a new 30,000 sq. ft. corrugated sheet plant at Youngstown, Ohio, operating under the name of **Valley Containers, Inc.** The new plant is a wholly owned subsidiary of the Toledo company and is equipped to manufacture all types of corrugated containers, printed packages and displays.

Changes in field representative personnel of the Films and Flooring Division, **The Goodyear Tire & Rubber Co.**, have been announced as follows: **George T. Duffin**, transferred to San Francisco headquarters; **William R. Berkinshaw**, now in Los Angeles; **Robert C. Lynes**, Detroit representative; **Kenneth J. Whisler**, transferred to Dallas; **Jay F. Smith, Jr.**, Philadelphia representative.

The Dow Chemical Co., Midland, Mich., announces the following personnel changes in the plastic sales department: **James A. Jones** of the Boston office will move to Midland where he will be assistant to the head of the molding powders section; **James C. Tobin** has been added to the Chicago sales office as a film and sheeting salesman; **Howard F. Schnepf** has been moved from Cleveland to the Detroit office; **Richard Dornan** is a new coatings salesman in Cleveland.

W. K. Neuman, formerly a product sales manager in the Metal Division of **Continental Can Co.**, New York, has been appointed director of product sales for



W. K. Neuman
(left)
J. L. Heinlein

that division. **John L. Heinlein** has been named manager of manufacturing for Continental's Central Division. Mr. Heinlein joined the company 33 years ago. Other appointments announced by Continental are **Bruce R. Peterson**, sales manager of the Boston District; **J. F. Fogarty**, sales manager for the Central District; and **R. D. Heavyside**, product sales manager for non-processed food and meat cans. **John C. Murray** has been named general manager of **Bond Crown & Cork Co.**, a Continental subsidiary, with headquarters in Wilmington, Del.

The head offices and Eastern Division offices of Continental Can are being consolidated in the Continental Can Bldg., 100 E. 42nd St., New York. Eventually the purchasing, Eastern metal division and New York district sales, fibre drum and paper container offices will be located in the same building.

Bensing Bros. & Deeney, makers of printing inks, have appointed **Norman H. Cooper** as sales manager and **Joseph H. Gillen** as purchasing agent, with headquarters at the company's home office in Philadelphia.

W. Ward Willett has been appointed merchandising manager of **Plax Corp.**, manufacturer of polyethylene bottles and other plastic products, Hartford, Conn.

Also announced by Plax is the appointment of the **Empire State Bottle & Barrel Co., Inc.**, Buffalo, N. Y., as upstate New York distributor for Plaxpak polyethylene bottles. The firm will warehouse 61 types of stock bottles.

P. M. Loddengaard, former president of **United Board & Carton Corp.**, has resigned from active participation in the company's affairs. **William S. Stuhr** was recently named president of the firm.

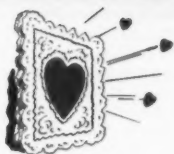
George W. DeSmet is now associated with the **Mehl Mfg. Co.**, Cincinnati, as special New England representative, with headquarters at 185 Devonshire St., Boston. **J. C. Hankey**, an associate of

Shellmar Products Corp's new plant at Medellin, Colombia, begins operations.





PATENTED



**Roses are red
Violets are blue
Displays like this
Make sales for you!**

Here's a "Valentine" that *dealers* love—a clever display packed with tempting Valentine candies. It's a combination sure to brighten any youngster's eye. And *that's* sure to brighten the day's cash register figures! This H & D display is a favorite of manufacturers, too, because it combines a shipping box with an effective point-of-sale display at an over-all saving.

H & D's book, "Pack to Attract" shows dozens of ways better packaging can help you, through better display . . . lower packaging costs . . . increased sales . . . better product protection. For a copy, write Hinde & Dauch, 5103 Decatur St., Sandusky, Ohio.

H&D®



HINDE & DAUCH
Authority on Packaging

FACTORIES IN: Baltimore • Buffalo • Chicago • Cleveland
Detroit • Gloucester, N. J. • Hoboken, N. J. • Kansas City, Kan.
Lenoir, N. C. • Richmond, Va. • Sandusky, Ohio
St. Louis • Watertown, Mass. *Offices in principal cities.*

Surprising Versatility...

NIEMAND BROS. ROUND and OVAL CONTAINERS

low cost metal or all-paper closures

Niemand Bros. containers can really help promote the sale of all sorts of merchandise. They adequately protect your products at all times. And efficient, low cost dispenser closures may be made entirely of paper when required.

Your needs—from designs through production to delivery—can be handled promptly. Immediate attention will be given your inquiry.

NIEMAND BROS. INC.

Manufacturers of PAPER TUBE PRODUCTS

37-11 Thirty-Fifth Avenue, Long Island City, New York
RAvenswood 8-0909



Plants and people

Mr. DeSmet, will also represent the Mehl firm in England.

Also announced by the Mehl Mfg. Co. is the appointment of **Dewey D. Bardwell** as southwestern representative, with offices at 309 Browder St., Dallas, Tex.



W. Hamilton

Walker Hamilton has been elected president of the **Riegel Paper Corp.**, New York. He joined the Riegel organization in 1921 and has been executive vice president and general manager since 1945.

John L. Riegel, president since 1936, will continue to serve as the principal executive officer of the company as chairman of the board.

Olin Products Co., Inc., newly formed company with responsibility for all sale and distribution of Olin cellophane, is now located in its permanent headquarters at 655 Madison Ave., New York. Olin cellophane is being produced in a new mill on the plant site of the **Ecusta Paper Corp.** of Pisgah Forest, N. C., a subsidiary of **Olin Industries, Inc.** **James L. Spencer**, vice president and director of sales of Olin Products, estimates that the total industry output of cellophane, even after Olin gets in production with eight machines in the Fall, will still fall far short of meeting needs. He points out that Olin production at the new plant will be a fractional part of the nation's

total consumption. Limited Olin production, Mr. Spencer stated, will require limited geographical distribution initially, but every effort will be made to distribute production where it will do the greatest good for the most users.



Dr. Truesdail

Dr. John H. Truesdail has been appointed technical service manager of Olin Products Co. Mr. Truesdail joins the company after 13 years with DuPont where he was technical superintendent of the film department at the Old Hickory, Tenn., plant.

John R. Redpath has been elected vice president in charge of operations and **Walter Ritter** vice president in charge of engineering, **Chicago Carton Co.**

Manufacturing and sales facilities of the **Paul L. Karstrom Co.**, Chicago, have recently been increased through the com-

Cartons engineered to hairbreadth **PRECISION**...



A few of the nationally famous companies using United Board & Carton automatic filling machine cartons

Allen V. Smith, Inc.
Lever Bros. Company
U. S. Gypsum

Congress-Haberle Brewing Co., Inc.
Montgomery Ward & Co.
George W. Hellick Coffee Co.
National Hardware Co.
The Kroger Co.
The Procter & Gamble Co.
Tully Bakery

for high-speed, automatic filling machines

High-speed, automatic filling machines demand a carton that's accurately dimensioned. It must not bend, jam, overflow or give other cause for costly machine stoppage. But precision like that has to be engineered into the very first plan. The exact quality, moisture content, shrinkage, thickness and stability of the paperboard must be known before the job starts. To give you that unvarying **PRECISION**, United Board & Carton Corporation starts with the raw pulp stock, and follows through all the way to the final cutting, scoring and printing.

Let us tell you how this mill-to-carton precision will better serve your needs. No obligation. Just write or wire...



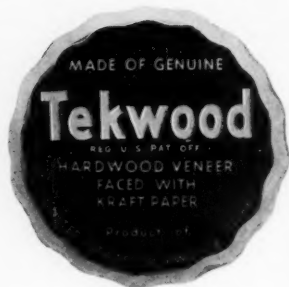
UNITED BOARD & CARTON CORPORATION

156 SOLAR ST., SYRACUSE, N. Y.

Carton Plants: SYRACUSE, VICTORY MILLS, COHOES, N. Y., SPRINGFIELD, O.

Board Mills: LOCKPORT, THOMSON, N. Y., URBANA, O.

TEKWOOD! It's light... it's strong... it's versatile ...and it lowers shipping costs!



TEKWOOD! That's the name for you to remember. The name of the tough, versatile kraft paper-and-hardwood "sandwich" that's helping manufacturers to reduce both packaging and shipping costs.

Tekwood gives you more *strength* with less *weight*. It's rugged...rigid. Easy to work. Hard to hurt.

Use Tekwood for decorative packages or large shipping containers. Its

smooth surface takes either decorative printing or shipping room stencils equally well.

Do you have special color requirements? We can match any color you specify on orders for 50,000 square feet or more.

Learn how Tekwood can help solve your packaging or shipping problems — save you money. Write today for full specifications and prices.

UNITED STATES PLYWOOD CORPORATION

55 West 44th Street, New York 18, N. Y.

Manufacturers of Tekwood and Weldwood® Plywood

Tekwood is a patented product—U. S. Pat. No. 1997344

SINCE 1883

**LABELS
BOXES
DISPLAYS**

N. Y.

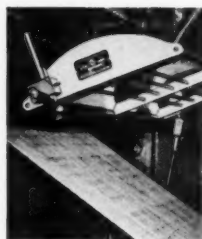
**HOWELL
of ELMIRA**

PA.

The Quality and Character of Howell Made Packages are identified instantly

YOU ARE IN THIS AREA
HOWELL OF ELMIRA
WILL GLADLY CON-
SULT ON ANY PACK-
AGING PROBLEMS

F. M. HOWELL & CO.
79-95 Pennsylvania Ave., Elmira, N. Y.



**FAST UNIFORM
HEAT
for DRYING and
SHEET
CONDITIONING**

HERBERT PARABOLIC HEATERS

- LIFETIME HEATING ELEMENTS
- AUTOMATIC OVEN MODELS
- THERMOSTATIC CONTROL
- STANDARD & CUSTOM-BUILT MODELS

For all Applications!

WRITE FOR
ILLUSTRATED FOLDER

HERBERT

PRODUCTS Inc.

74-32 Jamaica Avenue
Woodhaven 21, N. Y.

Plants and people

pletion of a 5,000 sq. ft. addition to the company's plant. The company supplies packaging machinery and equipment.

The Lynch Corp., in re-organizing its Ohio Divisions, announces the appointment of **Joseph P. McCarthy** as general manager and **R. L. Sears** as sales manager



J. P.
McCarthy
(left) and
R. L.
Sears

of the divisions. The Ohio Divisions comprise two manufacturing plants: the Par Compressor Division and the Packaging Machinery Division in Toledo, which produces machinery for forming, wrapping and cartoning butter and oleomargarine; equipment for packaging candies, cookies and cakes for the confectionery and baking trades, and the Morpac paper packaging machine. The Lynch Glass Machinery Division is located in Anderson, Ind.

The Chicago sales offices of **Milprint, Inc.**, converter of flexible packaging materials, have been moved to larger quarters at 100 E. Ohio St.

C. W. Houser, for many years manager of government sales for the Foil Division, Reynolds Metals Co., has resigned to head the **Houser Packaging Corp.**, 605 S.



C. W. Houser

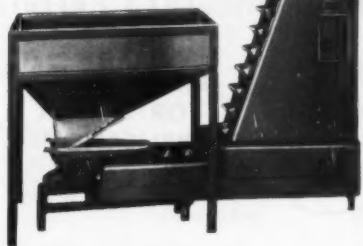
Capitol Ave., Indianapolis, Ind. In his new business, Mr. Houser will fabricate water-vaporproof barrier bags, sleeves, pouches and envelopes used in corrosion prevention. The latest automatic equipment has been installed and several new machines of his own design are being constructed.

The Chaplin Corp., manufacturers of molded-pulp products, Portland, Me., announce the formation of **Chaplin Sales Corp.** to distribute and service the developments of the Chaplin Corp. The new firm has been organized to serve more efficiently the pulp, paper, converting and packaging industries, particularly those manufacturing or using molded pulp or

COUNSEL MACHINE COMPANY

Robo-Lift Standard Elevating Conveyor

*Eliminate waste
and damage
from
Rough Handling*



- Drugs
- Confections
- Chemicals
- Foodstuffs
- Hardware
- Glassware
- Plastics

ROBO-LIFT assures dependable, continuous operation with minimum personnel.

Operation is simple—efficient—no "gadgets" or attachments to get out of order.

From in-feed to discharge, only gleaming stainless steel touches your product.

ROBO-LIFT "No-Spill" buckets with

rounded corners provide easy cleaning.

Many variations employing the same basic design can be made to suit specific requirements.

By eliminating waste in labor and materials **ROBO-LIFT** pays for itself in a surprisingly short time.

COUNSEL MACHINE COMPANY, INC.

8 Hathaway St.
Wallington, N. J.

New Brochure Available—Write Now!

HEADQUARTERS FOR MOLDED BOXES

Over 100 styles to choose from



Birthday Cake metal hinged, pearlized, candles shipped separately



No. 425 — 7 1/2" x 1 1/2" x 1", unHINGED, clear cover, opaque base



16/78 Chest — 5 1/2" x 3 3/4" x 1", with or without plastic sliding tray



No. 104 — 8" x 6 1/2" x 3/4"

Little boxes, big boxes. Transparent boxes, opaque boxes. Hinged boxes, unHINGED boxes. Plain boxes, compartment boxes . . . just as long as they're molded of plastic, and you need a thousand or more, we'll fill your needs.

No Mold Cost to Pay. Our affiliation with 20 leading molders puts us in a position to deliver the boxes you want at prices you'll like.

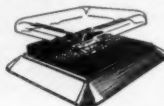
Write for Illustrated Catalog Sheets. Given a brief idea of what you want to package and quantity desired, we can send you photographs of appropriate boxes from our stock molds. Write today.

IRA HARMON CO.

41 East 42nd Street, New York 17, N. Y.



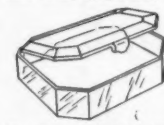
R.B. 2 1/2" diam., all transparent; also clear cover, opaque base



No. J.B. — unHINGED, clear cover, opaque base



No. 105 — 4" x 1 3/4" x 1 1/2", clear cover, opaque base



No. 718 — 2 1/4" x 1 1/2" x 1/2" hinged

Plants and people

fibre materials in sheet, roll, individual package and other forms.

C. Russell Mandeville has joined the Traver Corp., Chicago, as produce packaging expert to assist fruit and



C. R.

Mandeville vegetable growers, processors, packers and distributors. Mr. Mandeville has had experience in handling all types of fruits and vegetables from the grower level through the distribution point and is qualified to provide counsel in plant layout, processing and production problems, heat sealing, proper films, packaging, etc. Mr. Mandeville came to Traver Corp. from the Fort Pitt Tomato Co. and previous to that was associated with Farmer Brown, Inc.

H. H. Heinrich, Inc., machinery manufacturers, New York, announce a change from corporate to individual ownership under the name of H. H. Heinrich Co. Policy of the company continues as heretofore and no change has been made in management or personnel.

Paramount Paper Products Co., Omaha, Neb., announces the completion of a new, modern printing plant to specialize in the printing of gummed tape and labels.

The corporate name of Cornell Wood Products Co. has been changed to Cornell Paperboard Products Co. The new name, which is more descriptive of the company's operations and products, applies to the Hummel & Downing Division, as well. The change, however, does not entail any change in personnel, ownership or policies.

Thomas M. Holden, who has been associated with the corrugated paper industry for many years, has been appointed general manager of the new \$1,000,000 converting plant of National Container Corp. now being erected in Dallas, Tex. James J. Parks is plant manager.

The American Cyanamid Co. announces the appointment of Sheldon T. Dahl as West Coast manager of the Industrial Chemical Division and the Plastics and Resins Division. Herbert G. Pratt has been named manager of the San Francisco office of the Industrial Chemicals Division.

Blossom Mfg. Co., Inc., New York, manufacturers of plastic film houseware prod-

"KNOW-HOW"

... **Makes ADHESIVES Perform!**



ENGINEERED FOR SPECIAL APPLICATIONS

Now you can buy the PERFECT glue . . . engineered to meet your specific needs!

Our experienced Chemical Engineers study your operations and analyze your requirements. Then they prescribe the EXACT adhesive to do the job, and test it on your equipment and materials.

Corn Belt's "Engineered Adhesives" save thousands of dollars for hundreds of satisfied customers. May we prove that this extra service means extra profits for YOU?

Write today for free booklet.

We specialize in ALL Industrial glues:

- Phenolic Resins
- Urea-Formaldehyde Resins
- Liquid and Dry Caseins
- Resin-Latex Combinations
- Polyvinyl-Acetate Emulsions
- Hot Melts and Thermoplastic Pick-Up Gums
- Dextrine, Starch, and Tapioca Adhesives
- Flexible Animal Glues

CORN BELT ADHESIVES
COUNCIL BLUFFS, IOWA

Specify
EVENFLO
engraved rolls

—FOR
CONSISTENTLY
GOOD
COVERAGE

WITH



**GLUES
WAXES
PLASTICS
LACQUERS
HOT MELTS
ADHESIVES
ANILINE INKS**

**If it flows, EVENFLO
can apply it better!**

The answer to your problems involving the application of fluids. Evenflo engraved rolls apply your ink or coatings in the correct amount, continuously and automatically. No time-consuming adjustments are required and materials are conserved because of fewer rejects due to faulty application. Evenflo Engraved Rolls can improve your presswork and step up the efficiency of your coating operations by assuring uniform coverage.



Write for new Data Sheet describing Evenflo
Engraving Patterns and their applications

The new Evenflo Data Sheet is a complete guide to the use of engraved applicator rolls. Fully illustrated and includes tables of sizes. Aniline printers, paper coaters and specialty makers will find it helpful. Call or write Pamarco for your Evenflo Guide, today!

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PAMARCO

{ **EVENFLO ENGRAVED ROLLERS
NO-FLEX PLATE ROLLS**

PAPER MACHINERY & RESEARCH • INC.
1014 OAK STREET • ROSELIE, NEW JERSEY

need help
with your
**packaging
problems?**



try

REET*

1.7 GAUGE and up

Calendered Vinyl Films

in **non-toxic**, general purpose
and special formulations



If it's REET it's right!*

ROSS & ROBERTS, Inc.

Stratford, Conn.

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ROSS & ROBERTS SALES CO., INC.

Sales and Technical Field Representatives

350 Fifth Avenue, New York 1 • BRyant 9-7961

*Trade Mark



Paper at work and Play

Strike One! This silvery denizen of the lily pad can be as *toothsome* on your table... as fresh in January as on the July day you caught him. Thank the miracle of modern freezing and moisture control by Rhinelander.



A close shave is the proud boast of many a fine razor blade. There's no place here for rust and corrosion. A little thing, perhaps, but typical of the 1,001 metal parts now enjoying the safe, sure protection adequately provided by versatile Rhinelander G&G* papers.



HOT DOG!—everybody likes wieners. And say, have you noticed their clever new put-up?—cartons containing various quantities of "dogs" all priced and ready to buy. Rhinelander Greaseproof is the protective liner in this sanitary and convenient new package.

**Glassine
and
Greaseproof*

... the functional
papers that do so many tough jobs well.



IN THE LAND O' LAKES • RHINELANDER, WISCONSIN

Plants and people

ucts, announce the formation of their Packaging Division. The new division is designed to serve the needs of users of polyethylene packaging in civilian and industrial applications. A research and experimental laboratory has been established to work on the development of the particular needs of meat, food and chemical packaging. The new division is operated independently of the parent company.

The Indianapolis Wire Bound Box Co. announces the appointment of Henry T. French as Eastern Division sales manager, with offices in the Land Title Bldg., Philadelphia.

The Estes Co., Inc., export representatives for manufacturers of packaging machinery and equipment, have moved to 247 Park Ave., New York.

Shumann Equipment Co., packaging machinery manufacturers, have moved their plant and offices to 647 W. Magnolia St., Louisville, Ky.

John E. O'Neil has been appointed New England sales representative for the White Metal Mfg. Co., Hoboken, N. J., manufacturers of collapsible tubes. Mr. O'Neil's headquarters are at 153 Brooks St., Medford, Mass.

Dr. R. W. Merritt and S. F. Thune have been named assistant vice presidents of National Starch Products, Inc.

Container Corp. of America, Chicago, announces the appointment of William D. Jackson as director of purchases and Norman C. Myers as general purchasing agent.

Frank R. Holz, supervisor of package research for the Kraft Foods Co., Chicago, was recently honored at a luncheon marking his 25th year with the company.

Marc R. Smilow has joined the New York Division of Lassiter Corp., designers and manufacturers of food and textile packaging.

Ball Bros. Co., Inc., Muncie, Ind., announces the appointment of Ralph C. Edgar as director of industrial, personnel and public relations. Mr. Edgar was formerly with the Allegheny Ludlum Steel Corp. Five members of the Ball Bros. Co. management have become new vice

For competent glass engineering

-ARMSTRONG'S

Many users of glass containers consider Armstrong's engineers outstanding in the industry. These engineers have brought about modifications of finish, neck and base contours which are accepted today as ideal specifications. You can depend on Armstrong's engineering skill to improve the performance of your container. Your Armstrong representative can answer your questions about this service. Write to Armstrong Cork Company, Glass and Closure Div., 2309 Prince Street, Lancaster, Penna.



Paper takes many forms

• Envelopes, bags, soda straws . . . drinking cups, canisters, setup and folding boxes . . . mailing tubes, shipping tags, frozen food packages . . . these are only a few of the forms paper takes.

The makers of these important, everyday products are called Paper Converters. They constitute a gigantic industry—with annual sales above \$3,000,000,000 per year. They are volume users of many types of adhesives.

Paper Converting is one of a hundred industries in which Arabol is privileged to serve the leaders. Out of 65 years of pioneering, ten thousand adhesives formulas have been developed in our five laboratories. Arabol Adhesives are now supplied for more than a thousand end uses.

Somewhere in your business, adhesives are required—in the making of your product, in its labeling, packaging and/or shipping case. The cost of having your adhesives "made-to-order"—for each of your requirements—is so low you can't possibly afford any but the best.

We invite the opportunity to submit samples for you to test in your own plant—under your particular working conditions—for your specific requirements. That is the one kind of testing that assures you of satisfactory results.

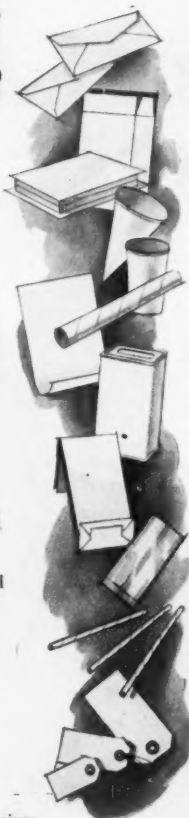
Your inquiry to Dept. 43 will bring a prompt response.

THE ARABOL MANUFACTURING CO.

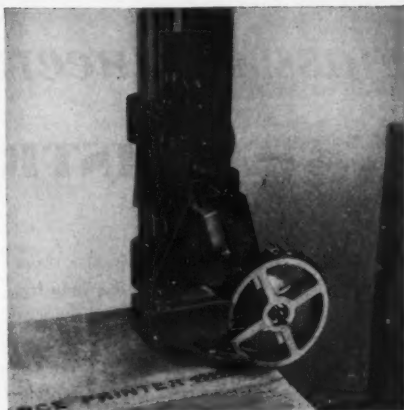
Executive Offices: 110 East 42nd St., New York 17, N. Y.

CHICAGO • LOS ANGELES • BOSTON • ST. LOUIS
SAN FRANCISCO • ATLANTA • PORTLAND, ORE.
PHILADELPHIA • LONDON, ENGLAND

Adhesives? ... ARABOL!
65 YEARS OF PIONEERING



PIERCE PRINTER



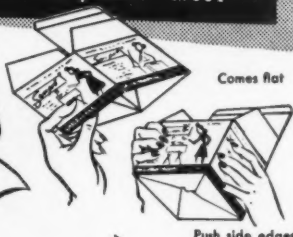
Automatic, friction driven Printer for continuous printing. Deep rubber type face for rough surfaces. Adapted for printing on brake lining, hose, lumber, etc. Other marking devices using steel stamps and rubber plates.

PIERCE WRAPPING MACHINE COMPANY

625 West Jackson Boulevard
Chicago 6, Illinois

SAVE LABOR

Two pushes erect



Comes flat

Push side edges to shape box instantly.

No more breaking of scores or hand tucking of flaps.

Your present package can possibly be converted to this style which is adaptable to most sizes, weights of boxboard, and types of printing.

For quotation and hand cut samples please send samples of your present cartons, say quantity required, and if you furnish printing plates.

We can also furnish all styles listed in circle.

Down push locks bottom automatically.

SET UP
FOLDING
"TRANSPARENT"
MAILING PRONG
METAL CORNER

Over
75 years of
experience
Norwood 12,
Ohio

C.W. ZUMBEL COMPANY good packaging ideas

MODERN PACKAGING

Plants and people

presidents: George E. Myers, G. Fred Rieman, Hugh Crawford, Robert W. Biggs and Fred A. Schlosstein.

The Davison Chemical Corp., Baltimore, Md., has appointed Jerry Goldsmith & Associates of Baltimore as agent for Protek-Sorb silica gel in Maryland, Virginia, the District of Columbia and certain counties in Pennsylvania.

International Printing Ink announces the completion of new buildings for their branch sales offices and service stations in Cleveland, Ohio, and Portland, Ore. The Cleveland branch is at 1325 W. 73rd St.; in Portland, address of the new building is 1525 N. W. 23rd Ave.

Karl Fink, industrial designer, announces the opening of his own offices at 515 Madison Ave., New York. Mr. Fink was previously with the Rahr Color Clinic and the Arthur S. Allen-Allcolor Co.

Allied Paper Bag Corp., Baltimore, Md., announces the appointment of Charles C. Catlin as general manager.

Victor L. Krannert, vice president and secretary of the Inland Container Corp., died suddenly July 6 at his home in Indianapolis, Ind. A graduate of the University of Illinois, Mr. Krannert served for many years as Inland's general production manager. Survivors include his brother, Herman C., president of Inland.

Mason F. Ford, vice president and director of St. Regis Paper Co., New York, died of a heart attack on July 30 at Sao Paulo, Brazil. Mr. Ford, who was 52 years old, served as manager of South American operations for St. Regis.

Roland M. Carr, president of Systems Publishing Co., publishers of *Packaging Systems* and *Universal Engineer*, died on July 29 at the age of 41. Death resulted from a heart attack.

Frederick W. Clayton, long associated with the Sun Chemical Corp. in its American Printing Ink Co. Division and the Sigmund Ullman Co. Eastern Division, died July 9. Starting as a salesman with American Printing Ink Co. in 1913, he was sales manager and vice president of that firm when it became a division of Sun in 1929.

SEPTEMBER 1951

Brushes

**LOOK BETTER...
SELL FASTER...**

**Packaged in eye-appealing
THILCO DECORATED
protective wrappers and bags**

Regardless of what your product is — chances are it, too, can be marketed easier, better, and practically just as economically with a Thilco specially designed DECORATED wrapper of its own... whether individually packaged or bundled. Merchants, wholesalers, and distributors will praise the day you convert from plain to DECORATED wrappings because it benefits them in so many ways. Thilco DECORATED wraps help to simplify inventory control by providing immediate product identification and shelf spotting — They help to instill confidence, trust, and prestige in your product because they show what they sell — sell what they show! Production-wise, you'll appreciate their economical adaptability to folding and forming, without breakage or tear, on automatic packaging machines. Plan now to increase the merchandising value of your product by wrapping to attract... as well as to protect.

Thilco protective wrapping papers include Glassines and Greaseproofs, Water-vapor Barriers, Special Treatment Papers, MG and MF Krafts, and Specialty Bags — Most of them can be custom DECORATED.

NEW YORK • CHICAGO

THILCO

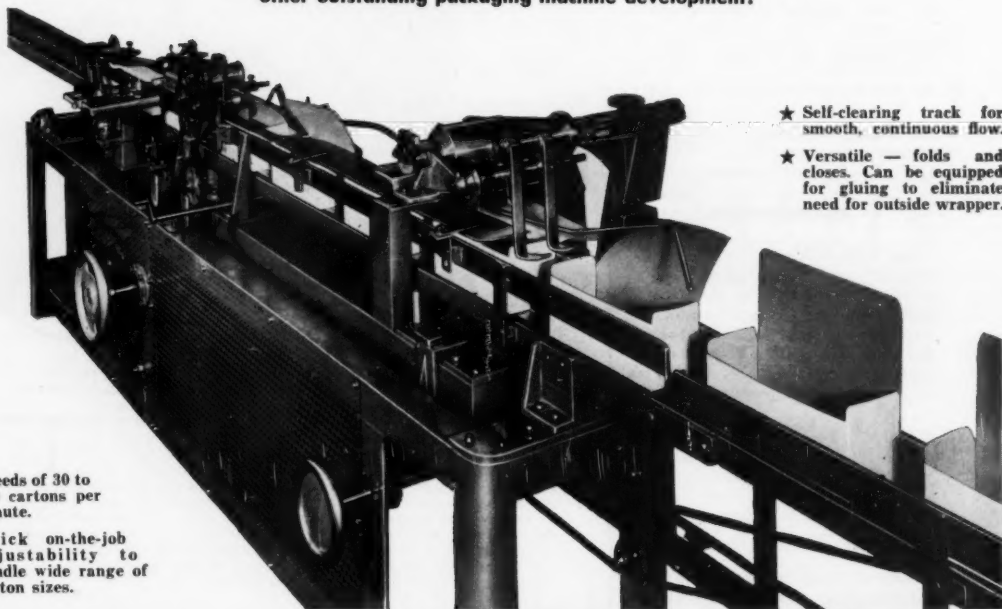
Functional Papers FOR PROTECTION THAT COUNTS!

DETROIT • MINNEAPOLIS

THILMANY PAPER CO. • KANKAUNA • WISCONSIN

To help you Save More *and Money* Than Ever introduces a Carton

Peters Machinery Company—the nation's FIRST producer of forming & lining and folding & closing machines—now brings you another outstanding packaging machine development!



★ Self-clearing track for smooth, continuous flow.

★ Versatile — folds and closes. Can be equipped for gluing to eliminate need for outside wrapper.

★ Speeds of 30 to 120 cartons per minute.

★ Quick on-the-job adjustability to handle wide range of carton sizes.

To find out how you can save money, increase production and save money, ask the Peters Way. Send your inquiry and specifications to Peters Machinery Company, of course.

Peters

Manpower, Time,

Before . . . **Peters**

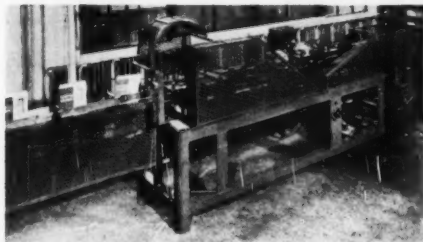
Packaging Masterpiece

NEW

PETERS MODEL CCY CONTINUOUS CARTON CLOSING MACHINE

Now . . . after months of performance-proving tests in several leading food plants . . . Peters announces the immediate availability of the NEW Model CCY Continuous

- **Complete, fast adjustability—on the job.** Simple dual controls quickly adjust for various carton sizes. No extra parts required.
- **Speed—as you want it.** Peters Model CCY Closing Machine produces finished cartons at speeds of 30 to 120 per minute.
- **Smooth, continuous flow**—featuring self-clearing track, vibrationless, silent operation; noiseless, friction-bearing construction.

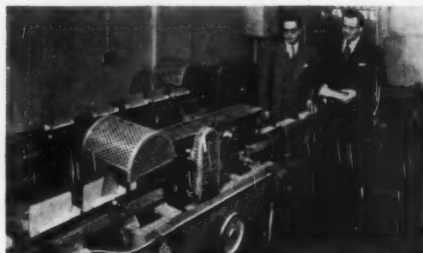


"The new Peters Closing and Gluing Machine has eliminated two people from our cracker-packing line," says Gale V. Clough, Robert A. Johnston & Company.

Carton Closing Machine.

Here are six reasons why this new packaging masterpiece will *save you more* manpower, time and money *than ever before*:

- **Versatility**—closes cartons with or without a liner; can be equipped for gluing to eliminate need for costly outside wrappers
- **Space-saving**—machine requires only 7-ft. by 20-in. floor area.
- **Most economical** carton closing machine obtainable—low in original cost, most economical to maintain. All moving parts readily accessible for easy cleaning.



"The new Peters Model CCY Closing Machine is unusually satisfactory. It is economical, and completely trouble-free," says A. J. Bono, Jno. B. Canepa Company.

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Lt. Col. Charles A. Shaunesy, Jr., QMC, has assumed command of the **Quartermaster Food and Container Institute for the Armed Forces**, succeeding **Lt. Col. Joseph Kujawski**, now assigned to duty as Chief, Food Service Division, Office of The Quartermaster General, Washington, D. C. Col. Shaunesy comes to the Institute from the New York QM Industrial Mobilization Planning Office. **Lt. Col. Raymond R. Guehring, QMC**, is now in command of the Military Operations Office succeeding **Lt. Col. Ewing Elliott**, who is now filling an overseas assignment.

Other appointments announced by the Institute are **Virgil O. Wodicka**, assistant to the scientific director, and **Dr. Carl S. Pederson**, head of the Stability Division, succeeding **Dr. Harry Fevold**.

Closer cooperation between the U. S. Air Force and the packaging field was pointed up at a recent meeting of Air Force officials and four industrial packaging experts at Wright-Patterson Air Force Base, Dayton, Ohio. **Lt. Col. John K. Mount** represented the USAF; industry representatives were **Neil Fowler**, General Box Co.; **Max Miller**, General Motors Corp.; **Heinz Loeffler**, Exeter Paper Co.; **Edward Walsh**, American Can Co. The four industry representatives recommended a revamping of the Armed Forces packaging program to include centralized control of packaging without disturbing existing lines of command. Standardization of packaging and corrosion control to eliminate varying demands for the packaging of identical items made by the same manufacturer, was also recommended. The conference, held at the invitation of Assistant Secretary of the Air Force, **Eugene Zuckert**, will be repeated for the Army and the Navy.

The Sixth Annual Meeting of the **Society of Industrial Packaging and Materials Handling Engineers** will be held at the Cleveland Public Auditorium, Cleveland, Ohio, Oct. 2-4. **Alvin S. Roberts** is chairman of the 1951 National Protective Packaging and Materials Handling Competition to be held in conjunction with the annual SIPMHE meeting. Thirty-five leading packaging and materials handling men will judge the competition entries.

The importance of teamwork in achieving packages which look and sell better is the subject of a new book, the second volume in a series published by **Lippincott & Margulies, Inc.**, 500 Fifth Ave., New York, industrial designers. Entitled "Packaging: Teamwork Makes the Suc-

cessful Package," it shows before and after photographs of packages of some 30 L & M clients and discusses the problem of each and its solution. Copies of the book may be requested from **Lippincott & Margulies, Inc.**

The American Management Assn., Inc., 330 W. 42nd St., New York 18, N. Y., has just published a booklet titled "AMA Workshop Seminars," giving the complete program for its Fall seminars to be held from September to December. The seminars are established as a major method of management education. In addition to the single-unit seminars, meeting for one three-day session on subject matter devoted to established management principles, procedures and practices, there will be two new types of seminars: multiple-unit and advanced-study. The multiple-unit is planned so that two or three three-day sessions will discuss progressively developed phases of the same basic topic. Advanced-study seminars will be held in series of at least three three-day meetings devoted to discussion and exploration of new techniques, functions, thinking and practice. Fee for the single-unit seminar is \$125. A single session of the multiple-unit seminar is \$125, a two-meeting series is \$225 and a three-meeting series is \$320. Fee for the advanced-study seminar is \$320. Copies of the booklet giving details of all seminars may be had on request to A.M.A.

Users of polyethylene squeeze bottles will find much useful information in a publication recently issued by the **American Agile Corp.** titled "Agilene (Polyethylene) Fabricated Containers." The illustrated bulletin describes fabricated, completely rigid bottles, jars and safety jugs for storage and transportation of corrosive chemicals. Capacities, weights and chemical resistance of the containers are listed. Copies of the folder may be obtained on request to **American Agile Corp.**, Plastics Division, Cleveland, Ohio.

Continental Can Co., Inc., announces publication of Research Bulletin #24, "Crown Handling and Usage." The 11-page booklet, which explains the construction of crowns and proper storage conditions, may be had on request to the company at 100 E. 42nd St., New York.

Members of **Continental Can Co.**'s research staff delivered papers at the 1951 **Institute of Food Technologists** meeting held recently in New York. Those addressing the meeting were **A. E. Stevenson**, who spoke on "Food Technology and the Canning Industry;" **L. E. Clif-**

corn, whose subject was "Stability of Thiamine During Heat Sterilization;" **V. C. Guse**, who described a new "Method for Measuring Gas Tightness of Crown Closures."

Laboratory testing of student-designed packages will be featured in a new course, "Packing and Packaging: Design Techniques and Cost Reduction Studies," to be offered this fall by **New York University's Division of General Education**. **Alyn C. Beardsell** and **Alfred Hoffman**, both of **Container Laboratories, Inc.**, will direct the course and guest lecturers will discuss more specialized areas.

A basic course in package design will also be conducted by the division during the fall semester, under the direction of **Egmont Arens**.

Both courses will meet for 15 weeks beginning in late September. Further information may be obtained from the Division of General Education, 3 Washington Sq., North, New York 3, N. Y.

The Bemis Bro. Bag Co., St. Louis, is again sponsoring two Fellows in the College-Business Exchange Program of the **Foundation for Economic Education** to encourage an exchange of information between teachers and businessmen. **Dr. M. T. Buchanan**, State College of Washington, and **Dr. T. E. Kyllonen**, University of Missouri, will spend six weeks in Bemis' general offices and manufacturing plants in St. Louis to acquaint themselves with the day-to-day operations of a typical American business.

A new 8-page folder describing the **Stokeswrap Automatic Packaging Machine** has just been published by the **Stokes & Smith Co.**, wholly owned subsidiary of **Food Machinery & Chemical Corp.** Included in the folder are illustrations, specifications and package limits of the "AS" and "BS" models of the **Stokeswrap** machines. Copies of the bulletin may be had on request to **Stokes & Smith Co.**, 4956 Summerdale Ave., Philadelphia.

Useful data on the properties and performance of **Paraplex G-60**, a polymeric resin developed by **Rohm & Haas Co.** which both plasticizes and stabilizes vinyl films, are offered in a new four-page folder titled "Heat Stability for Vinyls." The illustrated booklet indicates the resin's compatibility with a wide variety of materials, gives data on its use and contains four tables evaluating its physical and electrical properties. Copies of the folder are available from the

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For your information

Resinous Products Div., Rohm & Haas Co., Washington Sq., Philadelphia 5, Pa.

Users of corrugated will find the new ChippaKit reference file offered by the Chippewa Paper Products Co., Inc., helpful in determining the proper corrugated



for specific uses. The file is compact, measuring 8 1/2 by 3 1/2 by 5 1/2 in., and carries a complete line of samples of Chippaflex flexible corrugated and Chippewa single-faced corrugated. Each sample is individually labeled. The kit is kept up to date, since the company sends out new samples when they become available. The file may be obtained on request to Chippewa Paper Products Co., Inc., 2425 S. Rockwell St., Chicago 8, Ill.

The Packaging and Materials Handling Short Course being sponsored by Case Institute of Technology at Cleveland Public Auditorium, Oct. 1-4, as part of the Sixth Annual Industrial Packaging and Materials Handling Exposition, will include nine 2 1/2-hr. sessions featuring 35 speakers drawn from commerce and industry throughout the nation. Registration is open to all and may be made either for the entire course or for specific daily sessions. Registration fees for the full course are \$20 for members of the Society of Industrial Packaging and Materials Handling Engineers and \$30 for non-members and includes a copy of the annual Short Course Proceedings. Daily registration fees will be \$7.50 for members and \$10 for non-members. More detailed information on the program and registration blanks may be had from SIPMHE, 20 W. Jackson Blvd., Chicago 4, Ill.

A proposed revision of Simplified Practice Recommendation R146-41, Corrugated and Solid Fibre Boxes for Canned Fruits and Vegetables, has been submitted to canners, box manufacturers, railroads and truckers, etc., for acceptance or comment, according to the Commodity

Standards Division, Office of Industry and Commerce, U. S. Dept. of Commerce. A simplified list covering standard inside dimensions of boxes, based on number and arrangement of cans in boxes for the 32 standard sizes of cans, as well as the packing, sealing and loading of boxes for shipment are included in the proposed revision, copies of which may be obtained from the Commodity Standards Division, Office of Industry and Commerce, Washington 25, D. C.

Printed copies of Simplified Practice Recommendation R197-51, Glass Containers for Maraschino Cherries, are now available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 5 cents per copy.

The New Jersey Machine Corp., Hoboken, N. J., has won a decision in the Court of Customs and Patent Appeals granting the firm the right to continue the use of its registered trademark, "Code-O-Matic," for one of its machines for imprinting batch or control numbers on labels.

The 1951 ninth annual edition of "A Basic Marketing Chart of the United States," published as a service to management by the Research Co. of America, is now available. The 1951 chart provides basic facts on such marketing questions as shifts in population, changes in American income, retail sales figures for 1950, etc. The charts, priced at \$2.50 for one, down to 50 cents for 50 or more, may be ordered from the Research Co. of America, 341 Madison Ave., New York 17, N. Y.

A 40-page booklet titled "Feeding the Factory Worker" is available without cost from the Field Research Division, Paper Cup and Container Institute, 551 Fifth Ave., New York 17. The facts presented on methods, costs, financial arrangements, food service wages and feeding extra shifts are based on a survey of 240 plants and visits to a score or more of factories using different feeding methods.

Volume 24 Index of MODERN PACKAGING is now available. Subscribers may obtain the index, covering the period from September, 1950, to September 1951, free of charge by writing to the Editorial Department, MODERN PACKAGING, 575 Madison Ave., New York 22.

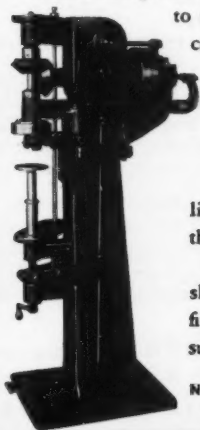
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The finishing touch to fibre can bodies can be made with Knowlton Seamers. The two-roll round, hand-fed Seamer No. 1, with Automatic Clutch,



NO. 1 SEAMER with Automatic Clutch



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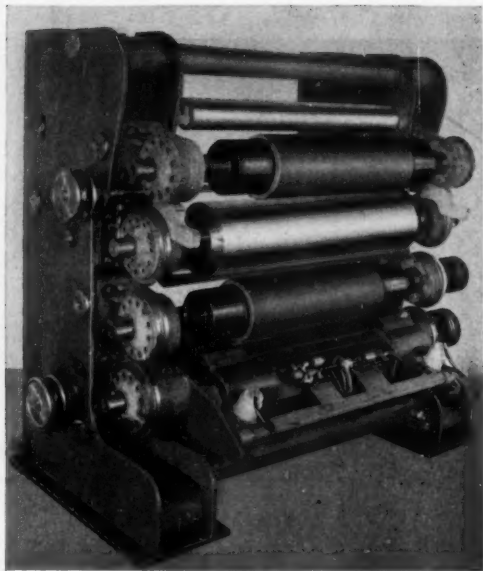
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Coating can be applied by gravure, offset gravure, direct and reverse roller methods, utilizing 18 different possible threading variations for coating and laminating on this single unit.

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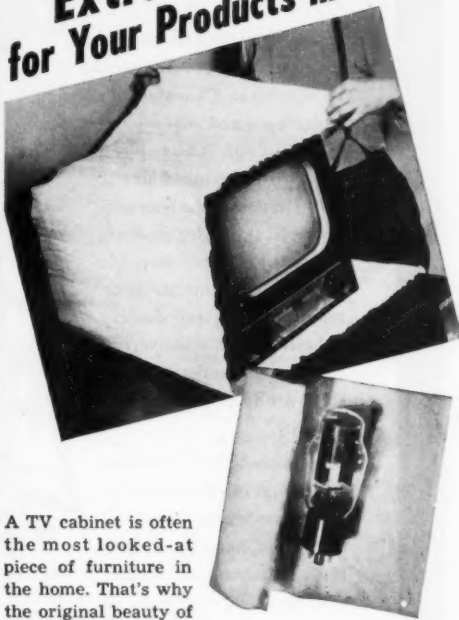
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A TV cabinet is often the most looked-at piece of furniture in the home. That's why the original beauty of so many sets is protected from damage in transit by Pad-Pak.

Here is the ideal protective packing. Made of cotton wadding, Pad-Pak has resilience to absorb impact . . . to protect against scratches and rub marks. Glazed outer surface gives extra body, greater ease in handling, and permits accurate cutting to any shape.

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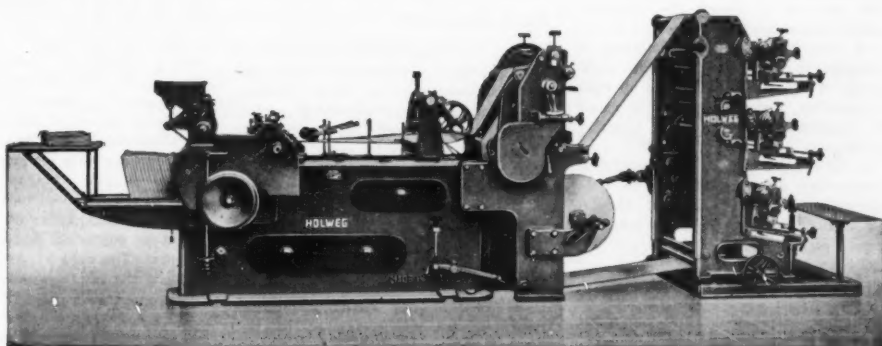


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Washington review

The packaging industry can expect a larger allocation of polyethylene for essential packaging uses, NPA told the Flexible Plastic Container Committee, because a greater supply of polyethylene is expected to be available in September.

NPA explained that August allocations were made on the basis of 45.8% for military needs; 27.2% for non-packaging uses; 12.9% for packaging applications which include frozen foods and chemicals; 1.6% for closures and 12.5% which the supplier could distribute as he saw fit in the free market. The committee said their quotas, historically based, are inadequate to meet requirements and recommended that NPA allocate larger amounts to the packaging field.

NPA also said that 750,000 lbs. of off-grade polyethylene which is applicable only to certain end uses is being channeled into distribution. This material was drawn from accumulated stocks of suppliers.

Steel strapping

The Steel Strapping IAC has made three major recommendations for revision of M-58, the steel-strapping regulating order:

1. That no person be permitted to use steel strapping for purposes for which he did not use it during the 12-month period ending April 30, 1951.
2. That NPA clarify the definition of strapping to mean "any round wire, eight gauge or lighter, or flat band 2 in. wide or narrower, made of metal which is used in conjunction with shipment, handling or storage."
3. That NPA permit the certification on purchase orders to be signed by a responsible individual authorized to sign for that purpose. (At present only the person placing the order can sign.)

Aluminum controls

All types of aluminum foil, except insulation foil, are now being handled through the Containers and Packaging Division of NPA. Aluminum foil for cap liners or closures is still under closure order M-26.

This broadening of the provisions of aluminum foil order M-67 makes it easier for foil converters by putting jurisdiction in the hands of one agency.

Previously aluminum foil for household purposes, for florists, gift wrapping and seal and label use was controlled by aluminum order M-7, revoked some time past.

The new amendment to M-67 means that you should direct all CMP applica-

tions for aluminum foil for the uses specified in the order to the Containers and Packaging Division of NPA.

Amended M-67 also specifies certain limitations on the conversion of aluminum foil, limitation to be calculated on a base period which is the six month period ending Dec. 31, 1950.

Restrictions given in Schedule I of the order are as follows:

Antibiotics Unlimited
Hygroscopic drugs, medical supplies, photographic films requiring protection from light; certain food products for human consumption 90%

Bakery goods (excluding cooked goods), chewing gum, confections, ice cream, cigarettes, tobacco 65%
Other uses of aluminum foil in containers or packaging material for protective purposes 65%
Household (except for home freezers), carton (except for protective packaging), florist, gift wrapping, seal, label and other uses not included in the above groups 50%

Other changes include establishment of quarterly rather than monthly quotas and the fixing of a minimum working inventory of not more than 60 days.

Lead allocation

The delivery of soft primary pig lead for any purpose can now be accepted only in accordance with an NPA allocation authorization. The allocating order, M-76, also restricts the required acceptance of rated orders for other grades of lead and lead products to 25% of scheduled production.

Certain exceptions to the prohibition on the delivery of soft primary pig lead apply if your total receipts during the calendar month in which acceptance occurs are, or would remain, less than 10 short tons. In this event, certification must be made to the supplier that receipt of shipment will be in compliance with M-76.

CMP containers allotments

NPA has announced the following fourth-quarter allotments of CMP metals for the Containers and Packaging Division:

Total steel—1,615,216 tons.
Total copper and copper-base alloys—271,000 lbs.
Aluminum—17,900,000 lbs.
Total allotments of metals for all uses during the fourth quarter are:
Steel—24,058,520 tons.

Copper and copper-base alloys—1,325,941,000 lbs.

Aluminum—681,475,000 lbs.

To check compliance with CMP regulations, NPA investigators are currently auditing records of about 1,000 representative companies in a cross-section of industries and trades affected by CMP. No advance notice will be given the companies to be visited in the next few weeks. Willful violations will be referred to the Department of Justice. Misinterpretation of regulations will be straightened out through instructions in proper compliance.

Cellophane

Controls on cellophane still lurk ahead because of the critical situation in sulfur. The status of sulfur should be clearer by the first of October.

The domestic sulfur industry, according to reports by producers, produced 421,116 long tons of native sulfur during the month of June. Several important steps have been under consideration for increasing sulfur supplies.

Steel for cans

Tin-can manufacturers will get a minimum of 1,000,000 tons of steel each quarter during the 12-month period beginning Oct. 1, according to NPA, which emphasized that this is a "floor" rather than a "ceiling" on steel allotments for the industry. The amount will be subject to adjustment upward each quarter. For the fourth quarter of this year, NPA said, an additional 100,000 tons of steel is being held in reserve temporarily to be allocated to can manufacturers if they show an essential need for that additional allotment. NPA indicated this practice might be continued through succeeding quarters. The industry advisory committee said the additional allotment for the fourth quarter was needed.

NPA outlined the terms of a proposed amendment to the present can order (M-25) which would set up three groups of can uses and specify permitted percentages of base-period can production for each. Group I would include perishable foods generally and some essential non-food uses, slated to be granted unlimited use. Group II would include less perishable food items which can be deferred until the pack season for other items has passed, slated to be limited to 90% of base-period use. Group III, slated to be limited to 70%, would include less essential items. The proposed change prohibits transfer of allocations from one group to another.

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Now, Patapar Vegetable Parchment also may seem almost too good to be true. Imagine a paper that's strong when wet, that can be boiled and remain beautiful, that is grease-resistant, odorless and tasteless.

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U.S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Edited by H. A. Levey

Container Distorting and Filling Machine, W. E. Flack (to Stokes & Smith Co., Philadelphia, Pa.). U. S. 2,537,181, June 19. Means for filling a flexible-walled container having an open end of predetermined normal shape, comprising a pair of guide members defining a path for movement therebetween of said container.

Cut-Out Clearer for Perforated Containers, R. D. Holmes (to Fleming Specialty Co., Charlotte, N. C.). U. S. 2,557,504, June 19. Apparatus for punching previously cut portions from a carton comprising a planar member adapted to support carton and guides for holding carton in proper position.

Solder Package, H. Shonberg (to Alpha Metals, Inc., Brooklyn, N. Y.). U. S. 2,557,574, June 19. A wire solder package comprising a hollow core member, at least one layer of wire solder wrapped around said member and having its ends bent over the adjacent end of said member and into its interior with a pair of removable end plates having bosses extending into hollow core in tight frictional engagement therewith.

Dispensing Carton, T. E. Piazze (to Shellmar Products Corp., Mt. Vernon, Ohio). U. S. 2,557,839, June 19. A dispensing carton for a rolled-up commodity sealed therein, which carton is made from a single blank of cut and scored board material having front, bottom and rear walls, with secured-together end walls at each end of the carton, a double cover arrangement, one of covers being hinged to front wall, the other end being secured to rear wall to provide a tamperproof top-wall cover and being provided with an opening transversely between end walls to free it from rear wall and permit access to commodity within.

Folding Carton and Opening Flap Therefor, O. M. Miller (to Owens-Illinois Glass Co., a corporation of Ohio). U. S. 2,557,914, June 19. A blank of foldable material formed with fold lines at which the blank is foldable to form a carton, a sealing flap at one end of blank united to body, said sealing flap having a strip of adhesive material on one face.

Apparatus for Filling Containers, R. H. Winters (to The Larsen Co., Green Bay, Wis.). U. S. 2,558,028, June 26. A device for dispensing sheet-material pieces into a procession of open containers moving adjacent the device, comprising a frame, a rotor having a cylindrical periphery and rotatably arranged on frame so that the bottom peripheral of rotor is adjacent to the procession of containers, a stack material removable onto rotor by means of suction.

Collapsible Box, J. M. Davenport, Medford, Ore. U. S. 2,558,126, June 26. A metal box including a pair of foldable side walls, a pair of foldable end walls

being constructed of laminated material for folding one side wall and one end wall upon the remaining walls, walls being constructed of laminated material with inwardly projecting interlocking flanges.

Paper Cup and Handle Therefor, W. E. Amberg (to Lily-Tulip Cup Corp., New York, N. Y.). U. S. 2,558,287, June 26. A paper cup comprising a side wall having an outer wrapping, outer wrapping having an opening therein and a free flap extending therefrom adjacent to the opening and lying close to the side wall of the cup to permit nesting of a plurality of cups.

Conveying and Transferring Mechanism, C. J. Malhot and E. Sramek (to F. B. Redington Co., Chicago, Ill.). U. S. 2,558,368, June 26. Conveying mechanism comprising a plurality of hingedly connected buckets forming an endless conveyor, means to drive the conveyor, oppositely disposed carriages movable toward and away from each other and adapted to support a wrapper to be arranged in said bucket when bucket arrives at a predetermined position.

Box Making, Filling and Closing Apparatus, F. D. Palmer (to Package Machinery Co., East Longmeadow, Mass.). U. S. 2,558,456, June 26. In apparatus for inserting an end-closure member in a container body, means for supporting a distended, tubular container body in axially vertical position and a magazine for supporting a stack of end-closure blanks in a position spaced from the position of distended container body.

Means for Heat Sealing Receptacles, D. M. King, Nitro, W. Va. U. S. 2,557,975, June 26. Apparatus for heat sealing the open ends of a thermoplastic tube, comprising a base, a platform fixed to base and adapted to support the tube thereon and a pressure member.

Device for Filling a Plurality of Bags With a Predetermined Quantity of Potatoes or the Like, A. Camps, Milwaukee, Wis. U. S. 2,557,939, June 26. In a device for filling a plurality of bags simultaneously comprising a bin for receiving the produce to be bagged, a table hingedly secured to front of bin, a plurality of filling funnels carried by table, means for raising and lowering table to facilitate the placing of bags on the funnels.

Bottle Carrier, S. N. Lebold (to Morris Paper Mills, Chicago, Ill.). U. S. 2,558,618, June 26. A closed-top type of bottle carrier of flexible fibrous material comprising a container having upwardly exposed, upwardly extending side walls, each provided with a set of bottle-receiving holes and tabs cut from the material of and hingedly connected to side walls, tabs normally covering bottle-receiving holes and certain of being swingable inwardly and upwardly of the container

and into engagement with the top of the container between sets of holes.

Bottle Carrier, M. I. Williamson (to National Folding Box Co., Inc., New Haven, Conn.). U. S. 2,558,712, 2,558,713 and 2,558,714, June 26. A bottle carrier comprising a carrier body of foldable sheet material and including a bottom wall, side walls, a bottle separating top webs extending substantially at right angles with respect to side walls and a handle consisting of a separate strip of foldable sheet material, including a central hand-grip portion.

Multicompartment Folding Carton, M. I. Williamson (to National Folding Box Co., Inc., New Haven, Conn.). U. S. 2,558,715, June 26. In a folding carton for a plurality of bottles, cans and other articles, the structural unit made from a blank of foldable sheet material, spaced portions of the blank being secured together to form a tubular structure including a plurality of creases between the several constituent parts of the unit.

Tobacco Pouch and Method of Making Same, T. E. Piazze (to Shellmar Products Corp., Mt. Vernon, Ohio). U. S. 2,558,780, July 3. A pouch which comprises a blank of heat-sealable material folded upon itself to provide front and rear walls, leaving a mouth closure and a closure member extending from rear wall and being foldable across mouth closure.

Lined Carton, J. A. Zinn, Jr., Chicago, Ill. U. S. 2,558,918, July 3. In a tube, a sheet of material provided with crease lines to form panels providing the sides of tube and a liner adhesively secured to sheet, liner being provided with a plurality of sets of scored portions.

Container for Resistors or the Like, R. N. Baggs (to International Resistance Co., Philadelphia, Pa.). U. S. 2,558,920, July 3. An envelope having semi-rigid flat sides and a central opening extending crosswise throughout the central portion thereof, envelope being of a size sufficiently large to hold a group of resistors in flat alignment.

Container, R. M. Dunning (to Waldorf Paper Products Co., St. Paul, Minn.). U. S. 2,558,940, July 3. A container including a bottom wall, side walls and end walls connected thereto, top closure panels foldably connected to side walls and connected marginal-edge flanges extending along the remaining edges of top-closure panels.

Snap-In Hinge for Box Covers, J. Coyle and W. F. Punte (to Continental Can Co., New York, N. Y.). U. S. 2,559,009, July 3. A box of sheet material having a rear body wall with a portion folded outwardly and against the wall to double the thickness thereof, the free edge of the folded portion being curled outwardly, upwardly and inwardly into an open curl with a narrow gap between its edge and the fold of the body wall.

Bottle Carrier, J. C. A. Fortner, Greenville, Ala. U. S. 2,559,150, July 3. A collapsible bottle carrier comprising a sheet metal tray-like bottom member hav-



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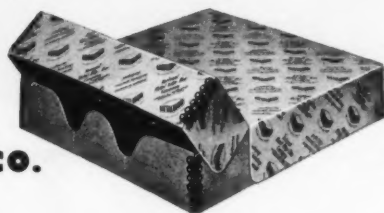
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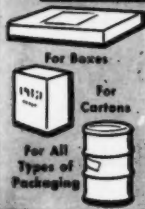
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ing shallow, upstanding marginal end and side flanges, one side flange extending higher than the other, sheet metal side walls hinged connected at their lower edges to the side flanges.

Liquid Container With Extensible Spout. L. A. Sherry, New York, N. Y. U. S. 2,559,202, July 3. A liquid-beverage-package container comprising a waxed paper box for containing the beverage and having a flat top portion with a circular hole through which a waxed paper cylindrical pouring spout is press fitted.

Dispensing Container. E. B. Duell, Pittsburgh, Pa., and A. Breau, Philadelphia, Pa. (Breau to Duell). U. S. 2,559,287, July 3. A dispensing container for small disk-like articles and similar articles having a diameter greater than their thickness, of the type employing a sliding cover with a projecting flange near one edge of cover cooperating with a projection in the box spaced from one end to push all but one of the articles into a closed portion, leaving only one item between projection and end of container.

Container-Filling Apparatus With Automatically Timed Filling and Conveyor-Movement Means. W. J. Boegly, E. C. Bennett, R. S. Morrison and C. Powell (to Sterling Drug, Inc., New York, N. Y.). U. S. 2,559,242, July 3. In a device for dispensing into successive groups of containers predetermined quantities of a fluent material, an intermittently movable conveyor for transporting containers and timeable means effecting intermittent movement of conveyor.

Packing Mechanism. C. D. Rice and G. C. Cook (to Colgate-Palmolive-Peet Co., Jersey City, N. J.). U. S. 2,559,318, July 3. In a container packing apparatus, a packing station, a movable conveyor for delivering packages into station and upon which packages may be accumulated in desired groups prior to entry into station and means for holding an opening container in packing position at said station.

Container Having Cover-Locking Means. F. L. Rushing and B. M. Williams (to Container Corp., St. Louis, Mo.). U. S. 2,559,320, July 3. A carton comprising a body and a slip cover therefor, body including side walls having upper marginal flaps folded downwardly on outer sides thereof and slip cover including depending side walls with lower marginal flaps.

Apparatus for Tightening Caps. W. B. Hullhorst and R. A. Pim (to Owens-Illinois Glass Co., a corporation of Ohio). U. S. 2,559,358, July 3. A machine for screwing caps on containers, comprising means for holding a container at a cap-tightening station with a cap seated loosely on the container and a cap-tightening chuck rotatably mounted over container at said station.

Carrier With Interlocking Partition Element. W. A. Ringle (to The Gardner Board & Carton Co., a corporation of Ohio). U. S. 2,559,374, July 3. A collapsible paperboard bottle carrier having side and end walls in articulation, bottom-



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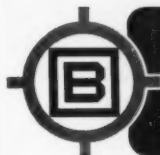
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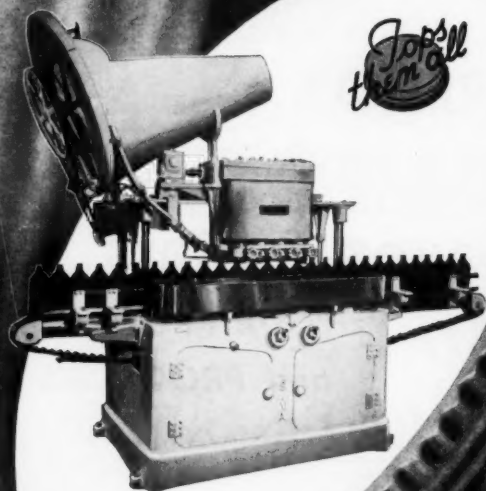
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forming elements articulated to the lower edges of side walls and extensions on bottom-forming elements affixed together so as to form a partial central longitudinal partition.

Golf Club Box, C. D. Welshenback (to The Hinde & Dauch Paper Co., Sandusky, Ohio). U. S. 2,559,552, July 3. A paperboard shipping and display receptacle for golf clubs comprising an elongated rectangular container having a bottom wall and upright side and end walls, side walls having intumed flaps extending from one end wall to the other and having free edges engaging said bottom.

Container, W. H. Ayres (to American Can Co., New York, N. Y.). U. S. 2,558,723, July 3. In a container adapted to be vacuumized or gassed prior to sealing, the combination of a body member having an upright body wall and a double seaming flange extending outwardly from body wall and connected thereto by a curved wall section, a cover having an upright countersunk wall and a double seaming flange extending outwardly from countersunk wall.

Case-Filling Machine, C. N. Neer (Burt Machine Co., Baltimore, Md.). U. S. 2,559,655, July 10. A case-loading machine comprising superimposed shelves movable from horizontal to inclined position to hold a full load of cans for a case forming a loading space.

Container, R. K. Pottle (to American Can Co., New York, N. Y.). U. S. 2,559,658, July 10. A container and cover assembly comprising a body member having an annular end member secured thereto and a cover having a depressed panel wall removably secured to body member and equipped with reinforced locking lugs.

Machine for and Method of Manufacturing Valve Bags, W. F. Grupe and A. P. Bamford (to Arkell & Smiths, Canajoharie, N. Y.). U. S. 2,559,873, July 10. In a machine for use in the manufacture of valve bags, means for spreading and flattening the valve of a valve bag previously to closing the valve end of the bag; also the method of applying a patch to the valve flap of a valve bag to form a filling sleeve.

Carton for Cylindrical Objects, G. C. Currie (to Dacam Corp., Charlotte, N. C.). U. S. 2,559,945, July 10. In a carrier for cylindrical objects having a top and a bottom and a pair of side panels, side panels having a plurality of cut-away portions disposed at spaced intervals along the junction of panels and the respective top and bottom, through which the upper and lower peripheral portions of a plurality of cylindrical objects may project.

Molded-Pulp Corner Protector, A. H. Risch (to Pulp Reproduction Co., Milwaukee, Wis.). U. S. 2,560,249, July 10. A protector for the corner of an article during storage and shipment, which is a unitary body of molded fibrous paper pulp having three resilient inner walls

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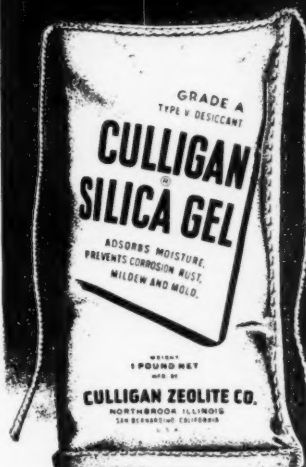
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snugly engageable with the three intersecting corner surfaces of the article.

Apparatus for Setting Up Cartons. L. Back (to The Interstate Folding Box Co., Middletown, Ohio). U. S. 2,560,405, July 10. A machine for setting up cartons, a platform where folding will occur which has an opening corresponding in size and shape to main box panels whereby folding of side and end panels will occur.

Mechanism for Successively Producing Bag Lengths From Continuously Advancing Tubular Webs. A. Potdevin and R. P. Bechle (to Potdevin Machine Co., Brooklyn, N. Y.). U. S. 2,560,473, July 10. Web-cutting mechanism comprising in combination a pair of rotary cutting elements adapted to receive the leading end of a continuously advancing web between them and to impart a predetermined shape to the web end.

Tobacco Pouch. H. G. Allen (to American Machine & Foundry Co., a corporation of New Jersey). U. S. 2,560,535, July 17. A pouch or container made of flexible sheet material having opposed marginally secured side walls, pouch being open at one end to provide a mouth for said pouch, one of walls projecting beyond the other wall at mouth to form a flap foldable over mouth.

Tamperproof Closure for Receptacles. E. Green (to Inter-Seal Corp., Spring Lake, N. J.). U. S. 2,560,793, July 17. A closure for sealing the opening through the end of a container, which comprises an outer cap adapted for rotary application to the end of the container, having a metal locking member within the cap.

Molded Fibre Article. M. P. Chaplin (to Chaplin Corp., South Portland, Maine). U. S. 2,560,847, July 17. A molded fibre carton for eggs and the like comprising two sections of substantially the same height pivoted to one another, one of same constituting a compartment section and the other a cover section.

Handled Cup or Like Receptacle. K. T. Buttery and L. W. Sutherland, Jr. (to Sutherland Paper Co., Kalamazoo, Mich.). U. S. 2,560,927, July 17. A receptacle comprising a side wall formed of a blank having a body portion terminating at one end in a sealing flap conformed at its end and slitted to provide oppositely disposed handle members.

Snap-Fastener Display Card. R. C. Chapman and W. W. Borowy (to Scovill Mfg. Co., Waterbury, Conn.). U. S. 2,560,932, July 17. A display card for complementary snap-fastener elements having common attaching members, said card having a series of complementary fastener elements detachably secured thereto.

Garment Container. C. D. Fallert (to Gaylord Container Corp., St. Louis, Mo.). U. S. 2,561,053, July 17. A four-sided, one-piece, folded blank garment container, two opposite side walls of which are provided at their upper ends with flaps that incline inwardly and upwardly toward each other into abutting relation to form a top for said container.

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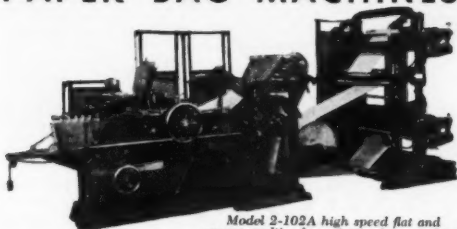
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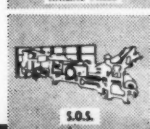
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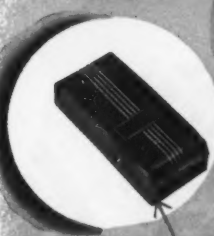
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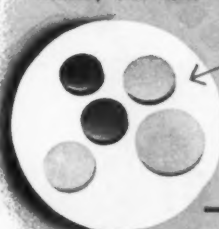
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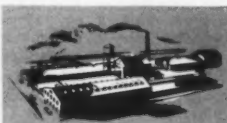
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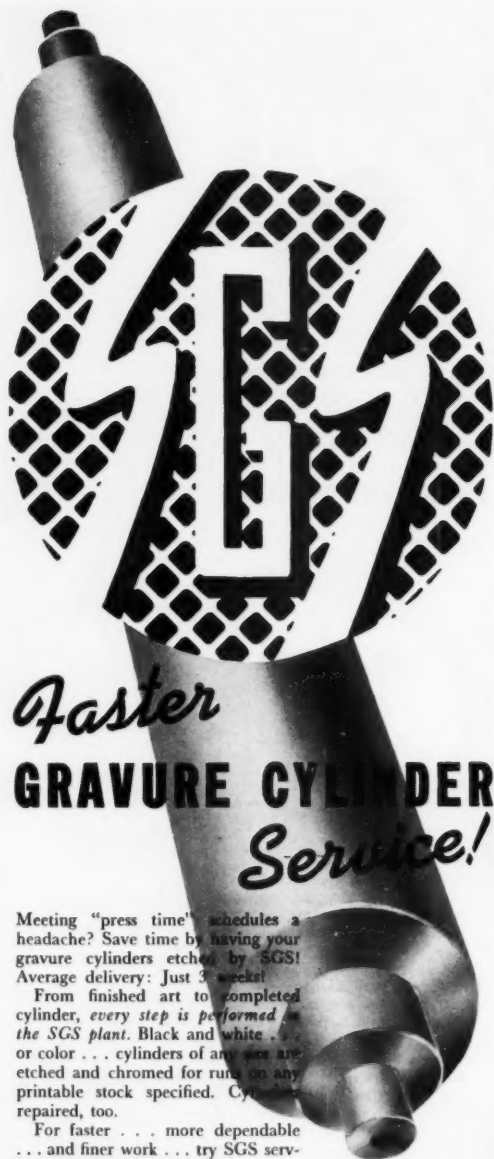
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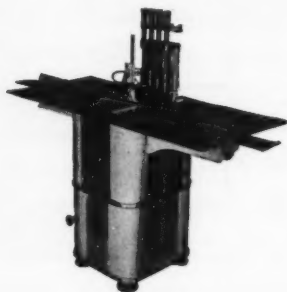
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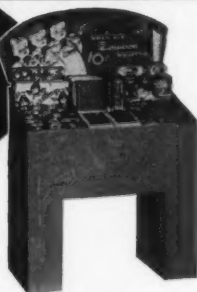
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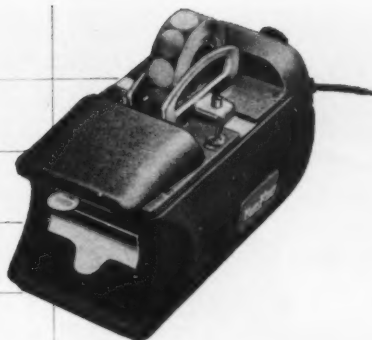
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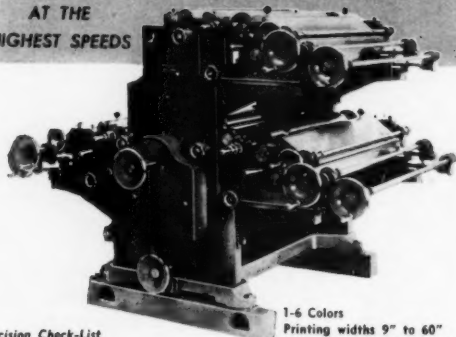
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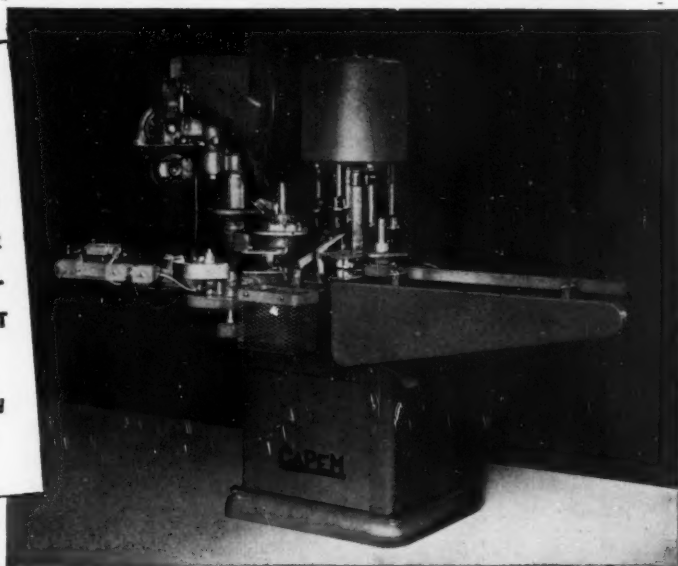
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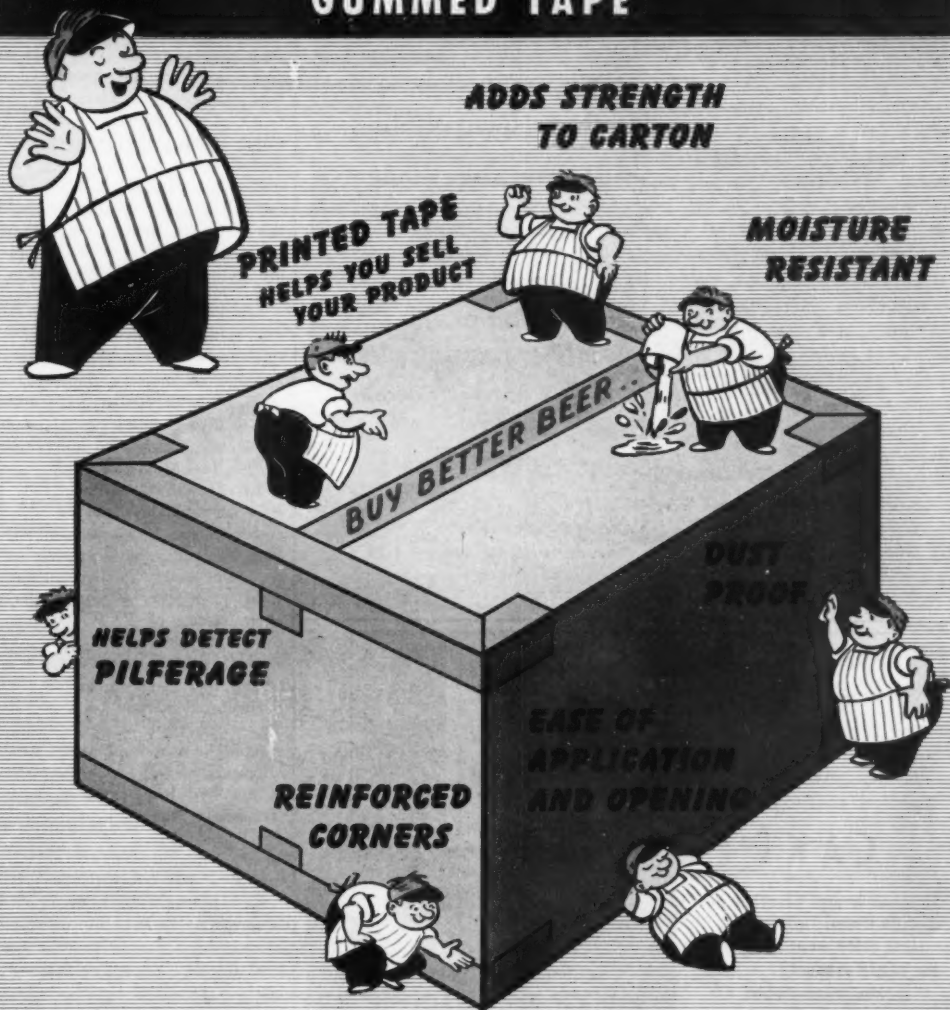
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Institute program

Seminars on the newest techniques and the most acute problems of packaging are scheduled for the Thirteenth Annual Forum of the Packaging Institute to be held Oct. 22-24 at the Hotel Commodore, New York, according to Herbert T. Holbrook of the Standard Cap & Seal Corp., chairman of the program committee.

Monday, Oct. 22, is to be "Washington Day"—a general session—where the status of controls on packaging materials and the outlook for supplies are to be discussed by Washington authorities. Questions will be answered in the forenoon, while the afternoon is to be devoted to problems of military packaging and the problems of industry in meeting military needs and caring for civilian requirements.

Tuesday, Oct. 23, is "Technology Day" under the general supervision of Robert de S. Couch of General Foods Corp. Two or three concurrent sessions on the latest tests of packages and packaging materials will require that companies have enough representatives present to cover all the sessions. A printing seminar under the chairmanship of E. H. Balkema of Colgate-Palmolive-Peet Co. is also scheduled for Tuesday morning, at which time the work of the Printed Packaging Materials Committee is to be presented. An informal seminar on printing will take place during that afternoon, during which the audience is invited to bring up their problems requiring group action or study. The Drug and Pharmaceutical Committee will hold its usual seminar on Tuesday afternoon. Heretofore this session has been held on the final day, but it has been moved up to permit members to attend the production session scheduled for the last day of the forum. Also scheduled for Tuesday afternoon are meetings of the Technical Committees that assemble only twice a year, including Food, Parenteral Closures, Paper, Glass, Films and Foils, Production Line, Export, Equipment, Adhesives, Materials, Shipping Containers and Packaging Education.

Wednesday, Oct. 24, is "Production Day" under the leadership of John A. Warren of American Home Products Co., assisted by E. R. Hamm of Sharp & Dohme, chairman of the Production Line Committee. Formal papers by production men will be presented in the morning, while in the afternoon

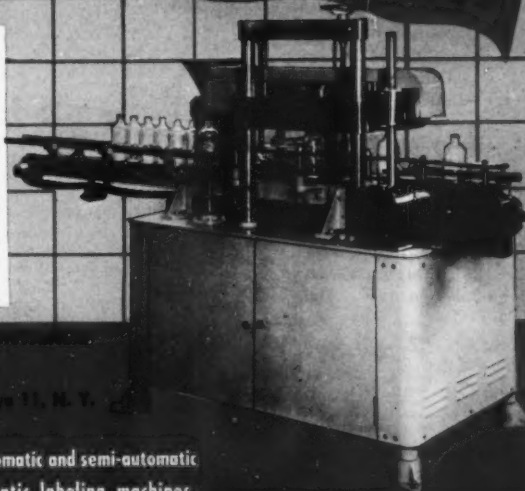
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there will be seminars on Drug Carton Lines, Glass Lines, Food Can Lines, Other Can Lines and Flexible Package Lines. A concurrent session on Wednesday morning will cover problems of petroleum-products packaging under the leadership of A. Chester Reed of The Texas Co., chairman of the Petroleum Committee.

The annual cocktail party and banquet will be held on Tuesday night.

Except for certain committee meetings, the Annual Forum of the Packaging Institute is open to all, whether members or not. Non-members are invited to write to the Institute for advance registration forms and hotel reservation forms.

Meat wrapping

(This article continued from page 123)

The value of the loose-packing, loose-wrapping procedure has been further demonstrated in commercial usage. At two large supermarkets—one in Philadelphia, Pa., and one in the New York metropolitan area—regular packaging personnel filled and wrapped 24 ground beef packages. Half were done in the usual tight manner, the other half as recommended. All packages were stored in open self-service refrigerated display cases for 24 hrs. Within 6 hrs. the tightly filled and wrapped packages had discolored, while the appearance of the loosely filled and wrapped packages remained virtually unchanged throughout the test. The same results were obtained by both markets.

Since the primary purpose of the experiment was to establish the effect of entrapped supplemental oxygen on ground beef color, no elaborate taste panels were conducted. However, samples of both the discolored and the salable ground beef were cooked and tasted by five persons. All samples were entirely satisfactory and no significant flavor differences could be detected.

Loose filling can best be accomplished by catching the meat in a tray directly as it comes from the grinder. Loose wrapping may be practiced most readily and without appreciable increase in film or labor costs in markets where wrapping is done on a hot-plate. In store meat operations where hand heat-seal irons are used, similarly effective packaging may be accomplished by laying the cellophane sheets cater-corner over the tray con-

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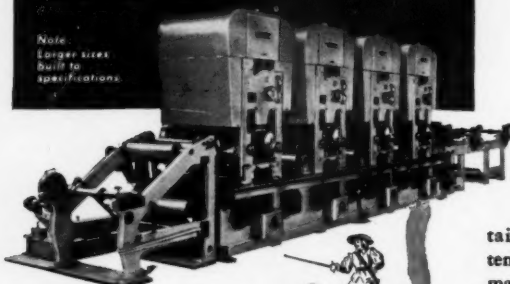


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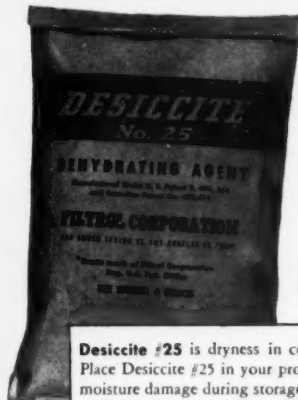
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taining loosely packed ground beef and inverting the tray over an empty tray of the same size, then sealing the package in the customary manner. The walls of the empty tray serve to prevent flattening the meat against the film, which occurs when packages are normally inverted on a table surface.

Packages should also be placed in the refrigerated self-service display case in such a manner that the film is not flattened against the meat by the pressure of neighboring packages.

It should be emphasized that the usual good practices maintained in better meat markets today must be continued. These include keeping meat grinders, especially plates and knives, clean at all times and free from bone particles and stringy sinews. Grinders, and the meat itself, should be kept under low temperatures (32 to 36 deg F.) at all times. The beef should not be handled any more than is absolutely necessary.

While this method makes it possible to keep ground beef in salable condition for as long as 48 hrs., it is of course not recommended that any market schedule its production of ground beef only at 48-hr. intervals. On the other hand, it is felt that the method will permit meat managers to operate on more flexible schedules, enabling them to keep their ground beef in prime condition longer and to discontinue the widespread and costly practice of discarding packages kept overnight.

Summary of conclusions

1. Ground beef and ground round steak may be maintained with salable appearance for as long as 48 hrs. when loosely packed and loosely wrapped with a film having the characteristics of Sylvania MSBO.
2. The gauge of the film has no effect on color retention. The oxygen permeability of both 300- and 450-weight film is sufficiently close to give comparable performance on ground beef.
3. The film should have moisture-proof qualities to prevent dehydration of the meat and resultant darkened color.

CORRECTION—In the story "New Container Reduces Candy-Cane Breakage," on p. 87 of our August issue, we referred to the Majesty Confections Co. of Philadelphia as Majestic Confections. We sincerely regret this error.

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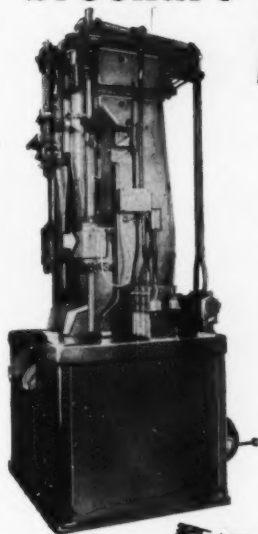
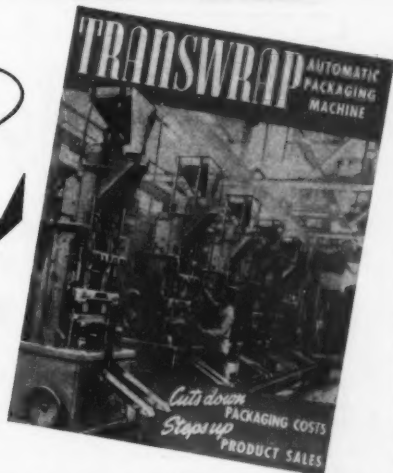


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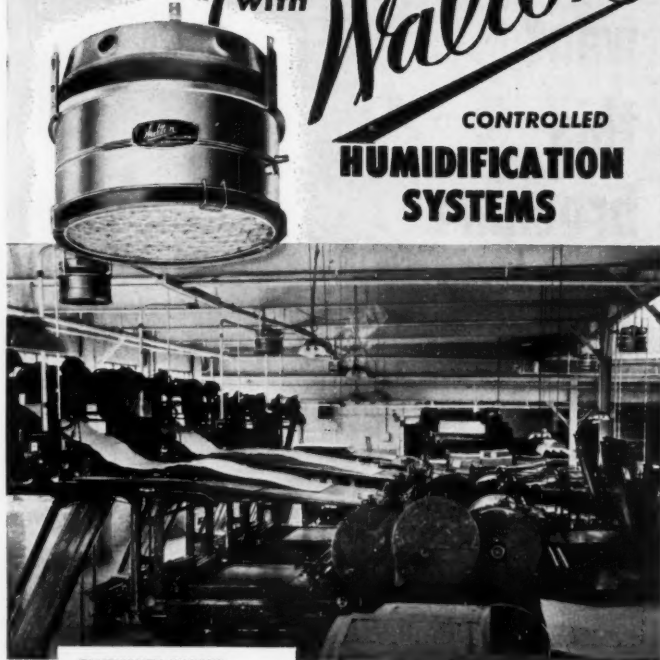
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Color for dairy

(This article continued from page 84)

Due to the perishability, quick turnover and tremendously large volume of dairy products, the problem of using up container inventory was not a serious factor in making the change. Dairies have warehouse space for only a comparatively small advance stock. Therefore, as soon as the new cartons were approved by the various public health authorities, orders could be placed almost immediately. Each division makes its own purchases from a list of some 20 suppliers, depending on geographic proximity.

Although no significant figures are yet available to indicate the effect of the entire program on sales, the reactions in the trade have been more than gratifying, according to the company. An exhibit of the colorful new milk containers attracted considerable attention at the recent supermarket convention and the company has received many favorable comments from its dairymen suppliers.

During the company's special summer promotion of cottage cheese the new Sealstec containers figured prominently, and for July two divisions reported sales increases of 55% and 25%, respectively, above the corresponding month of the preceding year.

In some areas, the supermarket operators reported increases in sales of cottage cheese in the new cartons even before the beginning of the advertising effort, indicating again the power of the improved package to make sales.

CREDITS: Design program, Raymond Loewy Associates, New York; Paper milk containers—American Can Co., New York; Kieckhefer Container Co., Camden, N. J.; International Paper Co., Single Service Div., New York; Dairypak, Inc., Cleveland, Ohio; Sealright Co., Inc., Fulton, N. Y. Ice cream cartons—Marathon Corp., Menasha, Wis.; Sutherland Paper Co., Kalamazoo, Mich.; Container Corp. of America, Chicago; Bloomer Bros. Co., Newark, N. Y. Cottage cheese containers—Lily-Tulip C. Corp., New York; Continental Can Co., Inc., New York; Sealright Co., Inc., Yogurt containers—Lily-Tulip Cup Corp. Sour cream containers—Lily-Tulip Cup Corp. and Sealright Co., Inc. Egg cartons—Robert Gair Co., Inc., New York, and Self-Locking Carton Co., Chicago, Ill. Butter cartons—Butler Paper Products Co., Toledo, Ohio; Sutherland Paper Co.; Marathon Corp.

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TRANSFER LEAF EMBOSSE. Bulletin explains the advantages and operation of a machine for marking all sorts of items by hot stamping through a roll of colored ribbon. Markee Machine Co. (9-901)

HEAT SEALING EQUIPMENT. Informative folder contains explanation of the functions and advantages of each of the five basic types of heat sealing machines. Sav-Way Sara Seal, Inc. (9-902)

AUGER PACKER-WEIGHER. Bulletin depicting the new Packomatic Auger Packer-Weigher for accurately packaging flour and other soft powdered products into bags, cans, or cartons. J. L. Ferguson Co. (9-903)

PREPACKING IN CORRUGATED. Pocket size "how to" book contains hints on use and economies of corrugated prepacks for a wide range of merchandise. The Hinde & Dauch Paper Co. (9-904)

SLITTER. Bulletin contains specifications on the Kidder G.T. slitter which features gearless construction and which will slit everything from lightest tissue to 200 lb. tag stock. Kidder Press Co., Inc. (9-905)

POLYSTYRENE-COPOLYMER RESIN EMULSIONS. Technical data sheet explains the properties and handling techniques for use of Polycor 376 and 380 polystyrene-copolymer resin emulsions for adhesive and coating applications on paper, textile, etc. American Polymer Corp. (9-906)

ANTI-RUST VAPOR WRAPPER. Price list on rolls and sheets of Nox-Rust vapor wrapper which chemically blankets steel products from rust by rendering moisture non-corrosive. Sample sheets included. E. W. Twitchell Inc. (9-907)

TRAY-LOCK PACKAGES. Folder illustrates several varieties of Tray-Lock packages for packed goods and other applications and machines for automatically assembling these packages from inexpensive blanks. Package Machinery Co. (9-908)

USES OF ALUMINUM FOIL. The "How, When, and Why" of using plain aluminum foil in protective packaging. Contains illustrations, price list, and data referring to military packaging specifications which can be met with aluminum foil wraps. Reynolds Metals Co. (9-909)

TUBE FILLING MACHINE. Bulletin covers the operation and specifications of a machine which fills, measures, and closes collapsible tubes. Perl Machine Manufacturing Co. (9-910)

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illustrations show many typical installations. Contains data on Water Finish attachment. Dilts Machine Works, Div. of The Black-Clawson Co. (9-914)

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PONY LABELER. Folder on a versatile labeling machine which will handle unusual jobs such as applying labels inside paper cones and applying tips to color cards in addition to regular labeling assignments. New Jersey Machine Corp. (9-917)

MOISTURE-PROOF PACKAGING. Specification sheets describe use of silica gel grade A desiccant for approved Method II packaging. Culligan Zeolite Co. (9-918)

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CYLINDER CALCULATOR. Handy pocket calculator gives cylinder circumferences and related diameters for commercial rotogravure. American Type Founders. (9-934)

PACKAGE FILLING MACHINES. Four bench models of the Whiz-Packer for filling all types of free flowing and granular products are described, together with a description of the hopper feed conveyor. Frazier & Son. (9-935)

BAG SEALER. A complete folding and heat-sealing machine operating on a continuous principle, the Fry bag sealer is described in detail. Illustrated. George H. Fry Co. (9-936)

JOB IN THE PAPERBOARD AND FOLDING CARTON INDUSTRY. Brochure illustrates and describes various phases of the paperboard and folding carton industry, pointing out future careers for students. Robert Gair Co., Inc. (9-937)

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AUTOMATIC IMPRINTER. The Gottscho Carton-Coda for imprinting flat cartons, containers, caps, cards, tags, and bags with code numbers, flavors, contents, etc., is discussed. Adolph Gottscho, Inc. (9-939)

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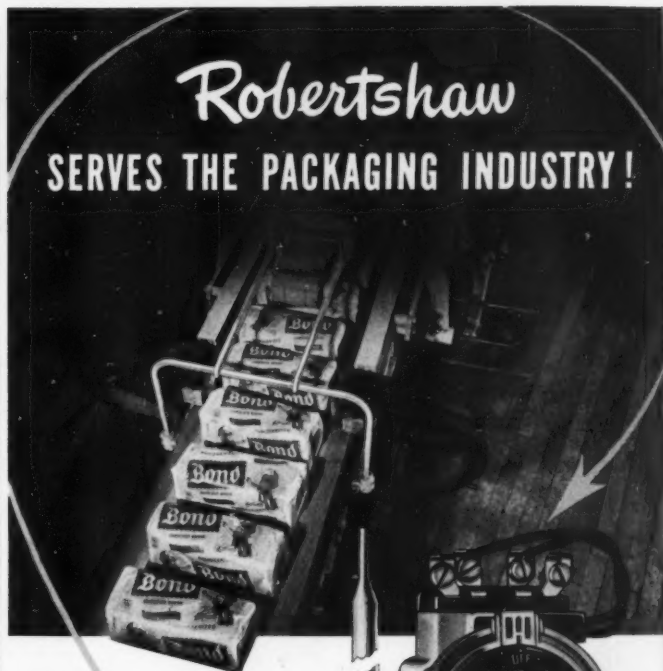
(This article continued from page 91) tant chain drug accounts, large retail drug stores and some department stores, particularly those featuring budget basements for popularly priced cosmetic items. This trend is becoming more and more evident with the shift to self-service type of operation. Fairly new but growing sources of distribution are the drug departments of supermarkets. In many of these accounts Cutex, because of its high prestige and fast turnover, is the only nail polish stocked.

Foreign markets

Few American firms of comparable size can boast as extensive a foreign business as the Northam Warren Corp. Within the 35 years since it was originated, there is scarcely a country where Cutex is not known. The *Bridgeport Herald* once said: "If an Australian aborigine . . . the female of the species . . . wags a delicately painted fingernail to show which way is Sydney, or a Geisha girl in Japan draws a well-manicured fingertip down the side of her nose to show her preference, charge the credit to the Export Division of the Northam Warren Corp., Stamford." Mr. Warren got a slant on foreign trade possibilities when he took samples of his cuticle remover and Cutex colorless nail varnish to South America in 1916. Since then, markets have been captured in area after area. Today the firm operates fully owned branch factories in five foreign countries, controls the manufacture of its products on a royalty basis in 26 other countries, sells in 99 foreign markets and advertises in 53 of them.

This unusual decentralization of manufacture has been due to Mr. Warren's foresight in anticipating barriers set up by foreign governments against imports in the non-essential or luxury class. The solution was local operations in these countries. And the result is steadily increasing sales all over the world. To keep personnel in these vastly separated fields in touch, the company publishes from the home office an international house organ called *The Globe Trotter*.

The record of Cutex's claims to *Packaging's Hall of Fame* would not be complete without a word about (This article continued on page 185)



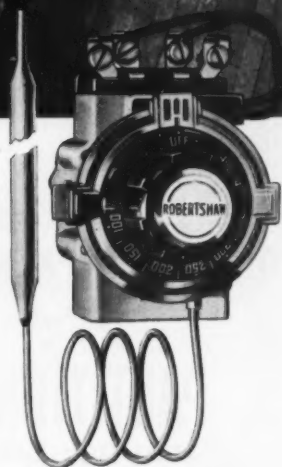
Robertshaw® MODEL D-1 THERMOSTATIC CONTROL

★ DOUBLE POLE

★ SINGLE THROW

★ DIRECT ACTING

(breaks circuit on rising temperature)



WHEREVER the packaging industry uses heat controls, there you will find durable, dependable Robertshaw Controls, famous for their flexibility, simplicity and day-in, day-out performance.

Model D-1, for example, requires no separate "Off" switch. Mechanical over-center snap-action make-and-break mechanism is actuated by a hydraulic thermostatic element consisting of bulb, capillary tube and diaphragm. Fine silver contacts and bridges. Case-hardened steel levers and supports. Stainless steel, electrically welded diaphragm. Entire mechanism mounted in a pressed steel body insulated with Bakelite. Write for catalog.

In Home and Industry, **EVERYTHING'S UNDER CONTROL**



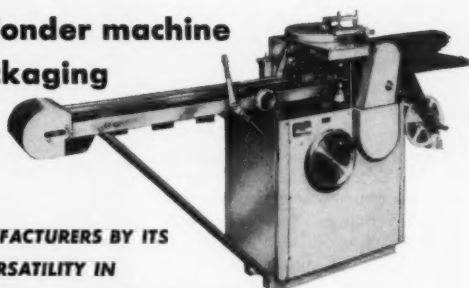
Robertshaw THERMOSTAT DIVISION

ROBERTSHAW-FULTON CONTROLS COMPANY
YOUNGWOOD, PENNSYLVANIA

Wrap-King



the Wonder machine of Packaging



**AMAZES MANUFACTURERS BY ITS
SCOPE AND VERSATILITY IN
SOLVING DIFFICULT PACKAGING PROBLEMS**

It wraps anything . . . round, disc shaped, oblong, oval, rectangular, whether it be . . . soft, sticky, hard or fragile . . . that can't be wrapped on an ordinary machine or has to be hand wrapped.

Write for further details and make arrangements to see this amazing machine in actual operation.



Manufactured by
WRAPPING MACHINE SERVICE AND TOOL CO.
70 FRONT STREET, WEST SPRINGFIELD, MASS.

WRAP-KING CORPORATION
Sole Agent — Sales & Engineering
961 UNION STREET, WEST SPRINGFIELD, MASS.

FOR BETTER PACKAGING!



PARTITIONS

THAT PROTECT AND
SAFEGUARD YOUR PRODUCTS

IMMEDIATE ATTENTION
Given to Requests for Estimates

Prompt Deliveries
Guaranteed



Reasonable Prices
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WRITE, PHONE, WIRE for QUOTATIONS on YOUR REQUIREMENTS

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Manufacturers of
Paper Board
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MANHASSET Does the Job Right!

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Find out for yourself Today!

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MANHASSET MACHINE CO.
MINEOLA, N. Y. • Garden City 7-7560



Does your package give a preview of a dinner-table hit?

The picture on your package plays a leading part in making or losing self-service sales. Supermarket shoppers today, according to Du Pont surveys, make two out of three buying decisions while they're inside the store—looking at displays and packages, thinking about menus.

* If you use a product illustration, does it do an effective job of helping the shopper picture a successful meal? Good package design, good photography or art work, and quality reproduction are important.

This is one of ten points covered in "How to Rate Your Package Objectively"—another Du Pont service to users. Ask your Du Pont representative for this handy folder that helps you analyze the self-selling job your package is doing, or write to the Film Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.



No Labels to Buy!

No Labels to Apply!



**When You
Package With
LUSTEROID
Vials and Tubes**

Labeling costs are cut when you use Lusteroid vials and tubes. These

modern plastic containers are printable so that your name and sales message become an integral part of each package. Thus, you have no separate labels to buy—no labels to affix.

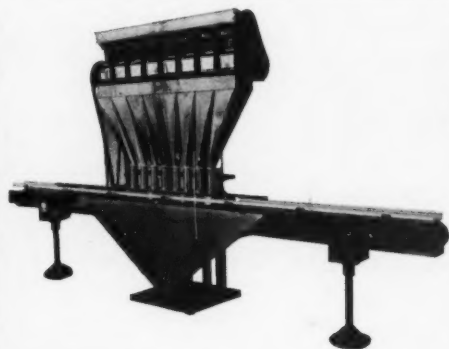
Savings like these are only part of the Lusteroid story. They indicate the remarkable flexibility in this type of package—features worth looking into for your packaging program. Sizes from 1/4" to 1 1/4" in diameter and lengths up to 6". Cork, slip-on, or screw-cap closures.

Write for details and samples.

LUSTEROID

Container Company, Inc.

10 West Parker Ave.,
Maplewood, New Jersey



CONTROLLED:

High speed PM 8 filler. Design shown for coffee can filling at 100 per minute at low initial cost. Semi bulk and dribble aluminum weigher with 50% fewer parts for unexcelled accuracy. Available in smaller designs or for jars and cartons.

Ask for Catalog 48



WEIGH-RIGHT AUTOMATIC SCALE COMPANY
JOLIET - ILLINOIS - U.S.A.

**MILITARY SPECIFICATION
PACKAGING**

BAGS & ROLLS

Moisture-Proof
Water-Proof
Vapor-Proof
Grease-Proof

We sell a complete line of cloth backed, paper backed and foil backed barrier materials to meet requirements of Army, Navy and Air Force packaging; also, gummed and pressure sensitive tapes, packing list envelopes and protectors.

AN	JAN	MIL
AR-61	JAN-P-131	JAN-B-121
AR-63	JAN-P-140	JAN-B-148
RM-101	JAN-P-658	JAN-P-108
MIL-C-6056	AN-B-20	JAN-P-116
UU-P-271a	AN-C-67b	JAN-P-117
100-14-A	AN-E-1b	JAN-P-125
19-B-13	AN-T-12a	JAN-P-127

APPROVED CONVERTERS OF SPECIFICATION MATERIALS
Write, Wire or Phone Your Orders



PAPER PRODUCTS
CHARLES E. KING & CO.
SHIPPING MATERIALS

970 WEST CHICAGO AVE., CHICAGO 22, ILL., TELEPHONE HAYmarket 1-0165

(This article continued from page 181) this company's contribution in World War II. More than 80% of its beautiful plant in Stamford, scarcely more than complete in 1942, was turned over to the manufacture of electric connector plugs for ships, tanks and planes. Huge financial sacrifices were involved in moving the cosmetic business to White Plains for the duration.

The same spirit that survived these hardships, however, enabled the company to revert to its peacetime pursuits and build even greater sales over the trademark that covers not only Cutex nail polish, but a complete line of manicure preparations (the only complete line in its price field), including lipsticks, cuticle remover, hand creams, nail pencils, emery boards, orangewood sticks—some 50 or more items in all, plus a line of completely packaged manicure sets for home manicures or gifts, priced from 50 cents to \$7.50. The company is probably one of the largest users of re-use cases and kits. With Peggy Sage products and the Olorono line, the total put-out under the Northam Warren name totals more than a hundred different items.

New NPA Packaging Division director

Robert de S. Couch of General Foods Corp. is the new director of the Containers and Packaging Division of the National Production Administration. It is understood that Mr. Couch is being given a leave of absence from General Foods to assume the No. 1 job in the Government bureau directly concerned



Mr. Couch

with administration of controls on packages and packaging material.

In the new organization of the Containers and Packaging Division, which had heretofore been on a temporary basis, Charles E. Lewis, previously acting director, becomes deputy director under Mr. Couch.

Mr. Couch since April has been an assistant in the Government Controls Division in the administrative offices of General Foods, devoting his full time to packaging-controls questions. Previous to that he was director of packaging research for the corpora-

This successful business shows once again not only how the power of the package helps to build successful business for a quality product when given the proper merchandising and advertising support, but how continually improved packaging can keep that product in a top-ranking position.

CREDITS: Cutex Nail Polish (for current packaging)—Bottles, Owens-Illinois Glass Co., Toledo, Ohio. Cap-and-brush applicators, U. S. Brush Co., Omaha, Neb. Polyethylene "Lac-R-Loc" insert licensed on patents held by Leo L. Kellett, Kansas City, Mo. Transparent "plume" molded by U. S. Brush Co., Omaha, Neb., using Koppers polystyrene. Bottle fillers, Pneumatic Scale Corp., Ltd., Quincy, Mass., and The Karl Keifer Machine Co., Cincinnati, Ohio. Capping and labeling equipment, Pneumatic Scale Corp., Ltd. Cutex manicure set case, Electrical Industries, Inc., using Bakelite vinyl film and Eastman Kodak Co.'s Kodapak cellulose acetate. Olorono-Polyethylene spray bottle and applicator, Plax Corp., Hartford, Conn. Peggy Sage-Bottle, Carr-Lowrey Glass Co., Baltimore, Md. Cap-and-brush applicator, U. S. Brush Co. Label, The Foxon Co., Providence, R. I. Carton, The Warner Bros Co., Bridgeport, Conn. Designer, Donald Deskey, New York.

tion. During World War II he served with the Quartermaster Container Institute in Chicago.

Mr. Couch is widely known in the packaging field through his work with the Packaging Institute. He was instrumental in the re-organization of the Institute three years ago and served for two years as a vice president, general chairman of the Technical Committees and chairman of the Technical Operations Committee. He is now a member of the Institute's Board of Directors and has been active in the planning of next month's annual Forum.

Mr. Lewis, a Department of Commerce career man, organized the Containers and Packaging Division at the inception of the NPA a year ago and previous to that was in charge of the containers and packaging section of the General Products Division of the Office of Domestic Commerce. He originated several years ago, and edited, the quarterly industry report *Containers and Packaging*, which has become a valuable source of statistics on all phases of packaging.



smoothest
seal
in the
world

Roto's a smooth worker when it comes to making polyethylene bags. Not a wrinkle or pucker to mar a sleek, smooth appearance. Beautifully seals a wide range of thicknesses quickly, efficiently.



MODEL PO-2

Latest Development in Heat Seal Bag Making

- Delivery system automatically stacks bags
- Handles shooting or tubing
- Production rates based on film gauge, not bag size
- Exceptionally fast production
- Adaptable to pilefilm

Roto Bag

MACHINE CORP.
304 East 22nd Street
New York 10, N. Y.

Schaefer
GLUERS and
CEMENTERS



APPLY GLUE TO LABELS
FOR
BOXES-BOTTLES-CANS
PARCEL POST PACKAGES

SAVE 35% LABOR. Speedy machine-gluing instead of slow brush-dabbing. Round, square and die-cut labels glued. No adjustment except for glue coating. Ideal for short runs and production.

NEAT RESULTS. Printing stays clean. No glue ooze at edges of labels. No lumps, blisters or wrinkles. Easy to operate.

FREE TRIAL

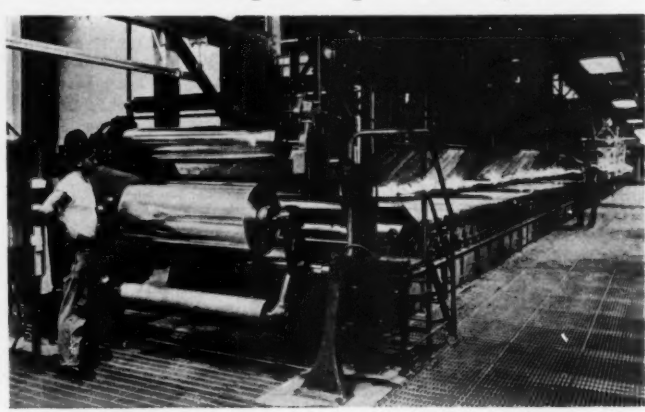


SCHAEFER
7" LABELER
 Disassembled for Cleaning

PRACTICAL CONSTRUCTION. Bronze bearings. Calibrated dial glue control. Hand & motor driven. Use vegetable or resin glue. 7", 12", 16", 22", 28", 34", 42" wide.

Schaefer
MACHINE CO.
55 CARBON ST.
BRIDGEPORT, CT.

New Olin cellophane plant in operation



Olin cellophane is shown for the first time rolling off one of the casting machines in the newest and most modern cellophane plant in the world. Put into operation on Aug. 27, the plant, located on the site of the Ecusta Paper Corp. of Pisgah Forest, N. C., a subsidiary of Olin Industries, Inc., East Alton, Ill., is now in substantial production.

"It will be our policy," stated John M. Olin, president of Olin Industries, Inc., "to distribute our cellophane so that it will be best used to strengthen the national economy in its present emergency. We intend to distribute Olin cellophane for use on products whose life will be extended by packaging in cellophane. In this way, our limited supply will effect the greatest savings in the nation's raw materials stockpile. Our new facilities will help relieve the cellophane shortage, but

will still leave the supply smaller than the demand, which greatly exceeds current production of the entire cellophane industry."

The eight new Olin casting machines are being "broken in" gradually and will not attain maximum production (about 33,000,000 lbs. annually) for several months.

The new plant was built for Olin Industries under contract by DuPont, which is licensing Olin to make cellophane under DuPont patents. Under the contract agreement, DuPont designed and built the Olin plant, incorporating facilities to make use of the most newly developed cellophane-making techniques and also furnished production and research know-how.

The new plant consists of one main building about 300 by 900 ft. in size, with eight smaller units for auxiliary operations and storage.

Contour wraps for lettuce

American Stores Co., Philadelphia, and the Grand Union Co., New York, are now contour wrapping lettuce and other irregularly shaped produce items in acetate film. Pre-packaging is done on a new type of wrapping machine.

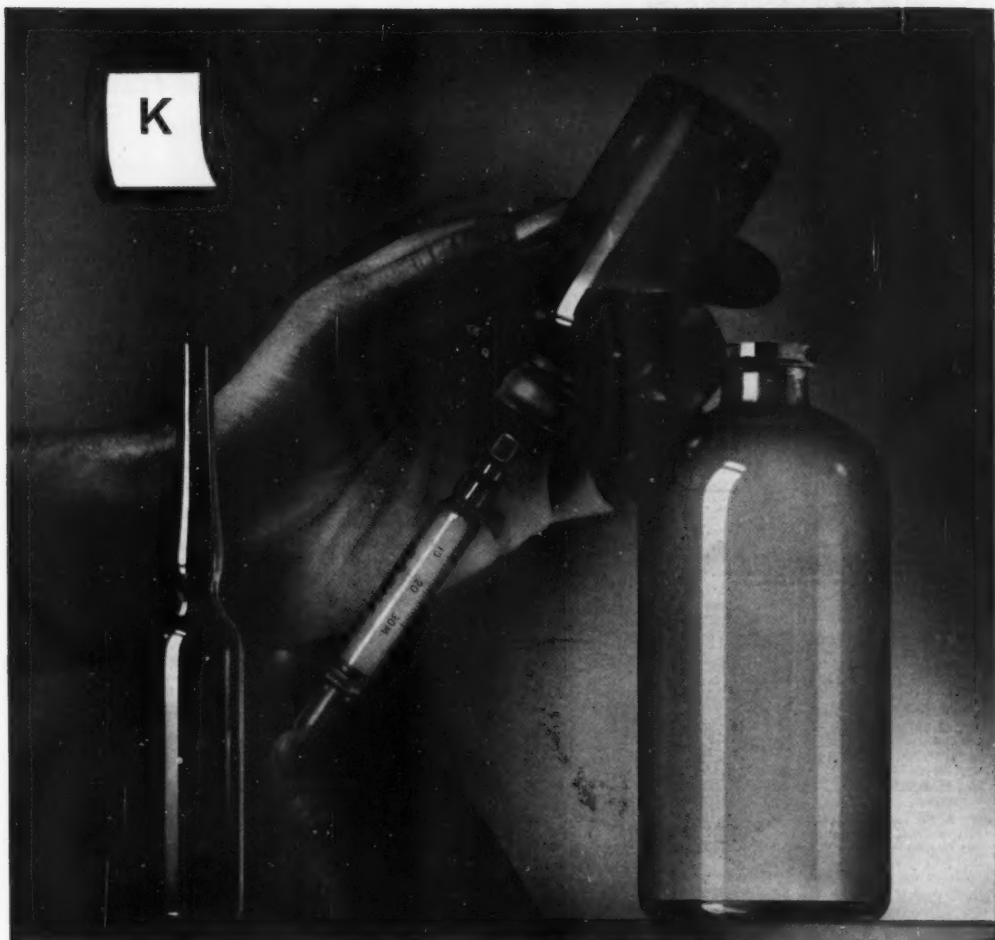
Powered by a 1/4 h.p. motor, the machine produces a heat-sealed transparent wrap which protects the lettuce against shrinkage and spoilage while providing 100% product visibility. It can be adapted for food products of various sizes and shapes. Among them are corn-on-the-cob, cauliflower, lemons, cheeses, meats and fruit cakes.

Roll stock acetate film is threaded through a feed roll to a cut-off device

which cuts it to desired size. Meanwhile the operator feeds trimmed lettuce heads into a five-hole revolving turret. A plunger descends on the lettuce and pushes it into the acetate film which forms around it as a tight contour wrap. Cutting and sealing jaws sever the excess film and heat seal the wrap in a split-second action, making a tab-type seal.

Production rate with a single operator ranges from 25 to 30 heads of lettuce per minute.

CREDITS: Form-a-Wrap machine, Triangle Packaging Machine Co., Chicago, Ill. Acetate film (Lumarith), Celanese Corp. of America, New York.



*Neutraglas Ampuls are available in capacities from 1 ml. to 50 ml.;
Neutraglas Molded Containers, available in capacities from 1 ml. to 1,000 ml.*

NEUTRAGLAS CONTAINERS— *trustworthy protection when life is at stake!*

Vital, sensitive serums, drugs and other solutions administered intravenously are safe when stored in Neutraglas containers. For Neutraglas containers are virtual certificates of the utmost safety to the purity, potency and pH factor of their contents.

Neutraglas ampuls and serum bottles are made from a special Kimble borosilicate glass that is the most resistant workable glass known. They are especially trustworthy containers because the protection of Neutraglas goes clear through its dense, solid, one-piece

structure.

Solvents, chemicals, sterilizing agents, even distilled water find Neutraglas containers persistently indifferent to chemical action. For detailed information on sizes and prices, write direct to:

KIMBLE GLASS TOLEDO 1, OHIO

Division of Owens-Illinois Glass Company



TUCK-O-MAT

from
THIS

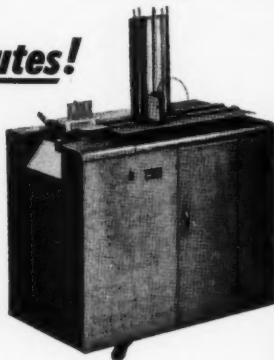
to
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in minutes!

You get a plus value in TUCK-O-MAT. Converts easily and quickly from and sizes of $\frac{3}{8}$ " x $\frac{3}{8}$ " to 4" x 5", lengths $1\frac{1}{4}$ " to 12".

- **SPEED**—30 to 75 per minute.
- **PORTABLE**—Easily rolled to any dept.
- **CHANGE OVER** parts are simple, inexpensive.
- **BALL BEARINGS** used throughout.

MODEL 50, 24" x 48" floor space; wt. 350 lbs.; mounted on rubber wheels. Patents pending.



TUCK-O-MAT

trade mark

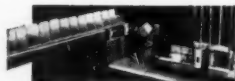


Special attachment handles & flap locks

Cellophane windows run on standard models

"CONVEY-O-MAT"
Model 50, plus conveyor

Just drop in your product. Operator can help load in spare time.



TUCK-O-MAT starts paying for itself when you turn on the switch. Faster set-ups, lower labor cost! Write for brochure. Include samples of your full line of cartons.

Machinery Mfg. co. inc.

2431 Dallas Street, Los Angeles 31, California

Dist. by New Jersey Machine Corp., Hoboken, Cincinnati, Chicago, Los Angeles



SAVE...with this New Container
of **MOLDED PAPER** by *Keiding*



Amazingly strong...

Light...

Low in Cost!

You, too, may have many uses for this tough new Keiding Molded Paper Container!

It has a tight-fitting cover, is ideally suited for granulated substances, powders, soaps, abrasives, small parts — even some liquids and semi-liquids.

Strong enough for shipping, attractive enough for a sales package, it is a sturdy container that will help solve your problems during the current material shortages.

WRITE for prices and samples. Standard colors, white — other colors available.

KEIDING PAPER PRODUCTS COMPANY

3048 N. 34th St., Milwaukee 10, Wisconsin

LARGEST MANUFACTURERS OF MOLDED PAPER CONTAINERS

LABEL SEAL-IT

Simplifies Bag Sealing and Labeling!



SEALS & LABELS IN ONE EASY OPERATION!

No staples, no pins, no hand work!

Simultaneously attaches labels and heat seals all suitable bag materials up to 6" wide; also seals to 10" wide. Cuts handling time; saves labor; **pays for itself in 6 months!** Insures tight pack even with oversize bags by folding tops first, if desired. Fast, safe operation with automatic Phantom Feed. Other Heat Seal-It Machines available. Write for circulars.

GLOBE PRODUCTS - HEAT SEAL CORP.
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HEAT SEAL-IT Machines

Fighting Men KNOW

Beauty Shines

from Within!



In war's ugly business nobody is particularly concerned about the brilliant attractiveness of Cochran's Aluminum Foil—the sales compelling qualities that make it so valuable for civilian packaging. But the use of Cochran's Aluminum Foil in protecting defense material—from capsules to cannons—proves that the beauty of this preservative wrap is far more than only "skin-deep". Whether your needs are defense or civilian—or both—we will welcome the opportunity to work closely with you.

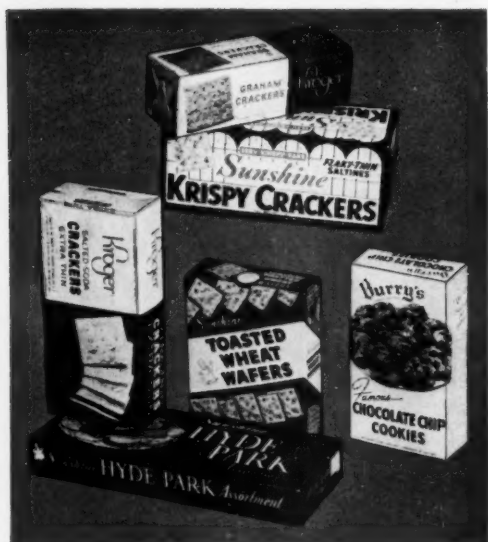
Cochran

COCHRAN FOIL COMPANY
INCORPORATED
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(SGS are not printers and have no financial interest in any printing firm.)

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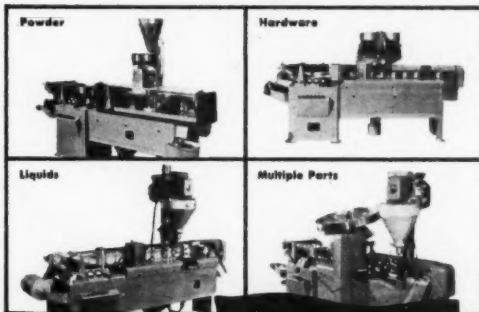


AUTOMATICALLY ON ONE MACHINE

1. Makes the bag from a roll of paper, film, or foil.
2. Fills the bag by count, by volume, by auger, or by special feeders.
3. Finishes up to 36,000 packages per eight hour shift.

Here is the cost saving, streamlined way to package your product for maximum economy and plus sales! Base machine makes a pouch style bag, opens it for filling, seals it, and discharges a completed package. Design allows for selection of the best filling equipment available for your product. Special feeders for unusual items. Standard unit makes bags from heat sealing papers, foils, cellophane, laminations, etc.

Versatile - Economical - Fast



Whether your product is liquid, powder, solid, multiple items, or requires packaging under nitrogen gas, the Bartelt Machine will handle your needs. Write for details today.

BARTELT
Automatic Packager

BARTELT ENGINEERING CO., Rockford, Ill.

FISHER'S FOILS

IMPORTANT ANNOUNCEMENT

We regret to announce that, owing to the damage caused to our Factory by the recent fire, orders will be unavoidably delayed. Every effort is being made to commence unhindered production as soon as possible.

We wish to thank our many customers and friends in the trade for their sympathy and to apologise most sincerely for any inconvenience that they may suffer.

FISHER'S FOILS LIMITED, EXHIBITION GROUNDS, WEMBLEY, MIDDLESEX
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MACHINERY FOR SALE

FOR SALE: Monorail Conveyor, 280' continuous chain, with mounts and several 90° corners, plus 45° ups and downs. Variable speed drive. Hangers at 2' centers. Includes foot-cube tinned steel baskets for foods. Also 6' stainless steel pre-washing tank and 18' thermo controlled gas fired stainless steel cooking trough. Ideal for rinsing and blanching ahead of quick freeze as is. Or adapt to paint, degreasing, or assembly line. Cost \$6,000.00, used little sell \$3,500.00. Reply Box 214. Modern Packaging.

FOR SALE: Four New Jersey Pony Labelite Labeling Machines for sale. Complete with motor controls. Reply Box 232. Modern Packaging.

FOR SALE: One used Pony Labelite available, excellent condition. Reply Box 233. Modern Packaging.

FOR SALE: A real bargain. Change in plans makes it necessary to sell latest model Pony Labelite labeling machine. Cost new approximately \$2900 and used less than 10 hours. Also have 9250 sheets 28x44-360M Champion all-purpose Litho Label paper, packed on skid. Cost approximately \$400. Will accept best offer in neighborhood of \$2600 for both items. Write Box 234. Modern Packaging.

FOR IMMEDIATE DELIVERY AT GREAT SAVINGS: International S. S. Straightline 160/min. Vacuum Filler. Resins S and LC Auto. Cappers. New Way MX Wraparound Labeler. Pony ML and MX Labelites. Stokes & Smith G1, G2 and BG88 Auger Powder Filler. Amco and Daugherty #46 Bag Sealers. Triangle Elec-Tri-Pak GSC. AGCA Filler. Filler 1, 2, 4 and 8 Head S. S. Filler. F. J. Stokes 90D Auto. Tube Filler and Closer. Knapp 429 and Coco Carton Closer. Pneumatic Scale Auto. Cartoning Line. Redington and R. A. Jones Automatic Cartoning Units. Hayssen 3-7 Package Ca 2 and DF. Seandia Auto. Cellophane Wrappers. This is Only a Partial List Tell Us Your Requirements.

UNION STANDARD EQUIPMENT COMPANY

318-322 Lafayette Street
New York 12, N. Y.

FOR SALE: 1-Pneumatic Scale Packaging Unit, including Tight Wrap, 32 per minute, 1-Self adjusting Standard Knapp Gher-Sealer & Compression unit, minimum carton 8 1/2" long x 5 1/2" wide x 5 1/2" high, maximum 15 1/2" x 11 1/2" x 8 1/2"; 2-Coco Adjustable Carton Gher Sealers Model A3901-12; 3-Pneumatic Scale Pouch type Tea Bag Machine; 1-Knapp 3B Wraparound Labeler; Pony M, ML, MX Labelites; Standard Knapp adjustable type D Wraparound Labeler; Burt AU Adjustable Wraparound, World Improved, Model CH & Model S Spot Labelers; Miller MP517, MPUS Cellophane Wrappers; Stokes & Smith S-S G-1 Powder Filler. Only a partial list. Send us your inquiries. Consolidated Products Co., Inc., 16-20 Park Row, New York 7, N. Y. Phone: BARELAY 7-0600.

FOR SALE: Raymond 4-00 pulverizing mill including motor and extras. Master model Level Filter including motor and extras. No. 80 Sprague-Sells 16-valve scrap filler MA783 practically new. Jenkin 9" steam valve angle practically new. Bowey's, Inc., 679 Orleans St., Chicago 10, Ill.

FOR SALE: Acetate box equipment. One Taber plastic Edger at \$1600.00; one Taber Thermo-fold at \$600.00 and two Taber Thermo-crease at \$400.00 each. All like new. The Munson Bag Company, 1366 West 117th Street, Cleveland 7, Ohio.

HELP WANTED

SALES REPRESENTATIVE: We are interested in locating sales representatives to handle defense packaging materials along the East Coast. This offer would be attractive to a salesman already calling on prime and sub-contractors inasmuch as sales contracts would be established—and our line of material would be added "grey." Reply Box 242. Modern Packaging.

WANTED: Chemist with Masters Degree for Research Department. Large middle west company, requires a man with complete knowledge of plastic films, papers, resin adhesives and coatings. This man will direct the developing of combinations of materials for packaging. Please furnish resume of experience and qualifications. Salary open, will be commensurate with ability. Reply Box 238. Modern Packaging.

PAPER CONVERTING: We want the services of a man who knows how to supervise production and control quality of printed, coated, laminated and embossed papers. Experience with fluid and oil inks, coatings and adhesives is necessary. A working knowledge of chemicals and converting machinery will be helpful. There is an excellent salary and bright future for the right man in this job. If you are interested write, giving your complete work history and all other necessary details. All replies will be kept confidential. Our organization knows of this advertisement. Reply Box 239. Modern Packaging.

PLASTIC FILM TECHNICAL SALES: Progressive, independent producer of plastic film is seeking the services of top-notch man for a top-notch position in sales and field service with particular emphasis on industrial and military packaging applications. A technical academic background is desirable but not necessarily essential. Full details regarding education, experience, salary requirements, military service status, etc., must be included in initial letter to qualify for consideration. An accompanying snapshot or photograph will be helpful and appreciated. Our own employees have been advised of this advertisement, and all replies will be treated most confidentially. Reply Box 231. Modern Packaging.

PACKAGING SALESMEN: All territories open on a new and patented transparent container. Shipped flat like the ordinary folding box at a price comparable to the ordinary box. You will be surprised at its simplicity and saleability. Commissions only. Exclusive. Reply Box 232. Modern Packaging.

PACKAGE DESIGNER: Experienced and imaginative folding carton designer for package development work. Must be able to create cartons to meet customers' problems, as well as specialty packages. Attractive proposition for the right man, including royalty on specialty items developed. Empire Box Corporation, 17 East Chestnut Street, Chicago, Ill.

WANTED: Experienced manager for growing Southern California custom paper converting plant. Must be familiar all phases slitting, sheeting, die-cutting, maintenance of equipment. Application must state complete history. Reply Box 240. Modern Packaging.

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BOX SALESMAN: New England manufacturer of plain and fancy set-up paper boxes wants thoroughly experienced salesman with an established following in the cosmetic and jewelry field for the New York area. Substantial commission. Reply Box 236. Modern Packaging.

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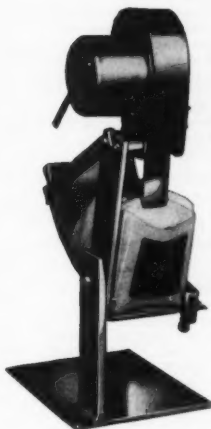
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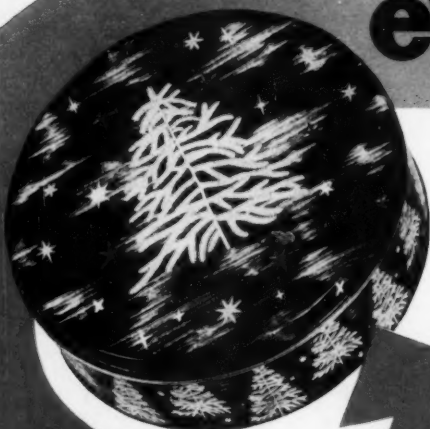
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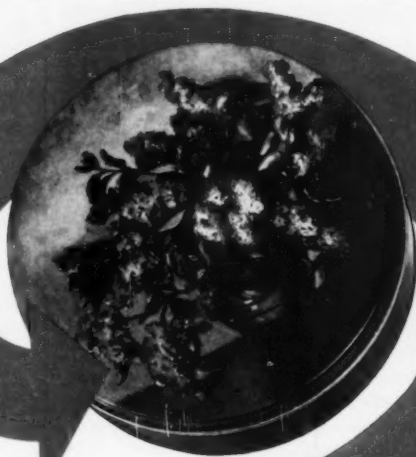
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